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ADDRESSES.

THE AMERICAN MEDICAL ASSOCIATION: ITS PAST, PRESENT AND FUTURE.

President's Address, delivered at the Semi-centennial Anniversary Meeting of the American Medical Association, at Philadelphia, Pa., June 1, 1897.

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The AMERICAN MEDICAL ASSOCIATION was born at the dawn of a great era in the history of medicine. Only a few years before its organization was effected anesthesia, which has robbed the operating room of its greatest terrors, came into general use and at once opened up new fields of usefulness for the surgeon. The new science of bacteriology, upon which is based our modern views regarding the etiology and prevention of disease, has been founded and firmly established since that time. The principles which govern the present treatment of wounds conceived by the immortal Lister and developed to the existing state of perfection by a host of his enthusiastic followers, have revolutionized the practice of surgery during the last quarter of a century. Normal and pathologic microscopic anatomy are recent acquisitions to our knowledge of living tissues in health and disease. Aseptic midwifery is the direct descendent of aseptic surgery and has secured for the lying-in-woman the same protection against puerperal complications, as the employment of aseptic precautions will prevent largely the occurrence of suppuration, sepsis and pyemia in the treatment of the injured and patients requiring operative treatment. Anesthesia and asepsis have created visceral surgery. Our knowledge of chemistry and physiology has been vastly increased during the last fifty years by thousands of earnest and devoted students in possession of improved instruments and apparatuses for accurate investigations. During the same time great strides have been made in the practice of medicine and the preparation and methods of administration of drugs. In the light of many of these recent advancements we have at least learned that disease is influenced for the better by aiding and assisting, rather than by combatting and opposing nature's resources. Translumination of the body by the wonderful Roentgen ray is the last and most important addition to our diagnostic resources in medicine and surgery. In these stirring events which have startled the medical world in such rapid succession during the last half of this century many members of our ASSOCIATION, dead and living, have taken a prominent and often leading part. In looking about for an appropriate subject for my address at this meeting I have deemed it expedient to utilize my time and this unusual opportunity in discussing as briefly as possible "The AMERICAN MEDICAL ASSOCIATION, its Past, Present and Future."

This is a day of rejoicing to the medical profession of the United States. We celebrate today the semi-centennial, the golden jubilee of the AMERICAN MEDICAL ASSOCIATION. You have come here from all parts of the Union to do honor to this festive occasion. It is appropriate that you should have selected Philadelphia as the place of meeting at this time; it was here that the organization of our ASSOCIATION was completed half a century ago. Philadelphia is near and dear to every American citizen, as it is the birthplace of the greatest and most prosperous nation in the world. It is here that on July 4, 1776, the most precious document in the possession of the American people—the Declaration of Independence—was signed, read and approved by the representatives of a people who craved for freedom, liberty and independence. It was here that the sweet music of the liberty bell was first heard, the reverberations of which reached from the Atlantic to the Pacific, and from the Great Lakes to the Gulf of Mexico, and which has continued and will continue to echo and reëcho over our vast and free country for all time to come. It is a source of congratulation to every and all honest and progressive practitioners of medicine that that document, which was the means of planting a free government upon the virgin American soil and creating a new nation, was signed and heroically defended by America's greatest physician—Benjamin Rush. The blood struggle for independence by a united patriotic people and its great success culminated in the foundation of the great Republic of the United States which in time gave the medical men an opportunity to establish American medicine upon a free American soil. It required a long time after the permanency of our government was assured for our professional ancestors to appreciate this opportunity and to take the necessary steps to secure adequate facilities for our young men to obtain a satisfactory medical education in this country and to create a medical literature of their own. Foreign text-books were used and European universities continued to be the Mecca for American students who sought a higher medical education. The country was new, its resources limited, its inhabitants represented different customs and nationalities, and the number of qualified practitioners limited. It is, therefore, not surprising that the organization of the profession, the establishment of institutions of learning and the foundation of an American medical literature met with many difficulties which it required years to correct and remove. Philadelphia has a special charm for every practitioner of medicine who has the interest and welfare of his profession at heart, as it has been, and still remains, the center of medical education and medical literature in this country, besides being the birthplace of the AMERICAN MEDICAL ASSOCIATION.

The members of the medical profession of this city, with Benjamin Rush at its head as a noble and inspiring example, have always been loyal to the

cause of a united profession, advanced medical education and the foundation of an independent American medical literature of the highest merit. In coming here today from the most remote parts of the United States in such vast numbers you are performing a duty you owe to the city so memorable in the history of our country and its medical men, who have taken such a conspicuous and active part in the development of American medicine and surgery. We are assembled here today to commemorate the work of a group of earnest men, patriotic American citizens, who took such an active part in uniting the medical profession of this country by bringing into existence and active operation the AMERICAN MEDICAL ASSOCIATION. Most of those who were helpful in laying the corner-stone of this great national institution have gone to their reward; few are left to tell the tale of the early struggles, frequent disappointments and final triumph. Of those who have been permitted to live long enough to witness the celebration of the semi-centennial, four names are familiar to you all, Nathan S. Davis of Chicago, Alfred Stillé of Philadelphia, J. B. Johnson, St. Louis, D. F. Atwater, Massachusetts. Davis, the father of the ASSOCIATION; Stillé, its efficient and faithful Secretary for many years. These two names have illuminated the firmament of American medicine for half a century, and they will continue to shine brighter and brighter as the ASSOCIATION increases in influence and membership. Honor to these men. A monument of marble or bronze; resolutions of thanks printed upon white satin and framed in precious metal would be but a feeble expression of the gratitude we owe them for their work so unselfishly rendered in founding and maintaining this ASSOCIATION. Their greatest satisfaction must remain in having been instrumental in launching the ship, steering it through many a storm with resolute determination and firm hands safely into the semi-centennial harbor, clearing it and handing it over in splendid condition for another generation to manage. While our hearts are full of gratitude toward the few surviving founders of the ASSOCIATION, we must not forget the labors of the many who have joined the silent majority. Hundreds of former members of the ASSOCIATION have performed important duties, written scientific papers, and by their work and example have distinguished themselves sufficiently to have their names written upon a tablet to be placed in the Memorial Hall of the future permanent home of the ASSOCIATION.

History.—Time does not permit to give a full history of the ASSOCIATION from its foundation to the present semi-centennial year, but I regard it as a duty to the ASSOCIATION to give a brief account of the motives that animated its founders and to call your attention to a few of its early members whose worth stands out in bold relief in its early history.

The founders of the AMERICAN MEDICAL ASSOCIATION were deeply impressed with the dignity and responsibility of our profession. They had for their object to secure by united action a higher standard of medical education, a more general diffusion of medical knowledge and the creation of a respectable medical literature. The motives which incited them to action are well shown in the utterances of two of the early Presidents. At the Baltimore meeting in 1848 Dr. Chapman, the President, alluded to the necessity of the members of the profession to work in harmony and unity to secure a more uniform and higher standard of medical education and to preserve the dignity of the profession as follows: "From slumbers too long indulged, the profession has at last awoke, and shaking the poppies from its brows, is recalled to a sense of what is due to itself and the obligations it owes to preserve its heritage, to be transmitted to posterity unsullied and without detriment or loss. Excited by this generous impulse it comes forward in the majesty of its might to vindicate its rights and redress its wrongs. To no other tribunal does it deign to appeal for these purposes. No mean petition of grievances, or supplicatory memorial for relief, or more immediate addresses to popular feeling to engage its favor shall sully our proceedings. We have in a spirit becoming our just pride trusted, and will, I hope, continue to trust our cause exclusively to the clear heads, the warm hearts and strong arms of the host enlisted in its service. We do not want, nor will condescend to accept any extraneous assistance. Confiding in our own resources, we shall through them maintain the struggle till conducted to victory and triumph." The implicit faith in the work of the ASSOCIATION entertained by Dr. Chapman and the results obtained have been fully realized during the past fifty years of its existence. At the same meeting the President-elect, Dr. A. H. Stevens, pointed out the power and influence of a united profession in the following beautiful and truthful language: "Our profession, gentlemen, is the link that unites science and philanthropy. It is one of the strongest ligaments that binds together the elements of society. It teaches the rich their dependence, and elevates the poor to a sense of the innate dignity of their nature. Its aim is to add to the comfort and the length of human life."

Animated by such noble sentiments the founders of the ASSOCIATION commenced and finished their task with a spirit of unselfishness and a keen sense of responsibility and devotion to their important mission. The idea of organizing a National Medical Convention originated in the New York State Medical Society and was discussed for the first time at the meeting in 1844. The main object of the promotion of this project was the elevation of the standard of medical education, and consequently the betterment and advancement of the whole profession. The needs of such a step were very apparent at that time. The wonderful increase of the population of the New Republic by immigrants from all parts of the civilized world required a rapid increase of medical men. New medical colleges sprang up in rapid succession in different parts of the country, and the rivalry between them made it impossible to effect a change for the better without strong influences brought to bear upon them from without. Young men began the study of medicine without even a common school education, and had no difficulty in obtaining a diploma upon attendance of two courses of lectures of four months each. All students attended the same lectures with limited or no hospital and clinical facilities. To the thoughtful medical men of that time it was plain that such a condition of things would soon result in lowering the practice of medicine to a trade instead of elevating it to the dignity of an art and science. Quackery in its worst forms prevailed, the services of the honest physician were undervalued and his standing in the community, compromised on all sides by his less conscientious competitors with and without diplomas. The founders of the ASSOCIATION had in view, to effect through

their combined influence a higher standard of preliminary education of those who should enter upon the study of medicine, lengthening of the college terms and better qualifications for the degree of Doctor of Medicine. All this had to be gradually accomplished without any legislative aid. Such radical changes in our system of medical education could only be attained by our persistent efforts in the course of time, but during the fifty years of the existence of the ASSOCIATION they have been wrought and perfected to an extent far beyond the most sanguine expectations of its most enthusiastic founders. The ASSOCIATION during this time has accomplished much more than what it was originally designed for. Through its influence nearly all of the medical colleges have adopted a systematic graded course of instruction combined with ample hospital, clinical and laboratory facilities. Besides all this it has brought the members of our profession in the various sections of our vast country in close touch and intimate social relationship so beautifully described by one of its distinguished and most active members, the late Dr. Bennett Dowler, who in an editorial on this subject said; "As a social and professional *reunion* of kindred spirits and great minds, its memories afford perennial delight. It has given impetus to the progress of medical polity and science; it exercises moral suasion, rather than that of authority; it has brought together a bright constellation of intellect, cemented the bonds of friendship among good men and true, and it will leave a luminary track of light in the moral firmament of the Æsculapian heavens throughout the expansion of the Republic."

History has demonstrated the necessity of associated action in advancing the interests of the arts and sciences, commerce and the learned professions. The origin and the success of the AMERICAN MEDICAL ASSOCIATION have demonstrated the full meaning and force of this statement. Individual efforts accomplish but little in the correction of long standing and widely disseminated evils. In 1835 the faculty of the Medical College of Georgia proposed the holding of a convention of delegates from all the medical colleges of the Union. This proposition met with little encouragement on part of the remaining medical schools, and the first movement which contemplated a convention of delegates, not only from all the medical colleges, but also from the regularly organized medical societies throughout the New Republic, was made in the Medical Society of the State of New York, at the annual session in February, 1839. At this meeting, upon motion of Dr. John McCall, it was decided to hold a National Convention in the city of Philadelphia in 1840. The movement did not meet with sufficient encouragement to carry out the desired object. In the meantime the cause of medical education received a new and vigorous champion in the person of young Dr. N. S. Davis. He was born in the State of New York, Jan. 9, 1817. Until 16 years of age he assisted his father in managing a farm. After receiving the limited advantages of a rural-district school training he attended for six months Cazenovia Seminary. With this scanty preliminary education he entered upon his professional studies at Fairfield, in the old College of Physicians and Surgeons of the Western District of New York and graduated with the class of 1837, being then but a few days over 20 years of age. Endowed with a logical mind and great power of discrimination he became impressed during his college life with the importance of a systematic graded course of instruction. His attendance upon lectures was arranged with such an object in view and he is probably the first graduate of an American Medical College who enjoyed the benefits of a graded course of instruction, which was arranged by himself and not by his Alma Mater. Ever since his graduation as a member of the American medical profession and as a teacher he has been an ardent advocate of systematic graded medical instruction, and the medical college which he later founded was the first one in this country to formulate and carry out his ideas. At the time he entered upon the practice of his profession in New York the Medical Society of that State was fostered and guided by Dr. John Stearns. Almost from the beginning of his professional career Dr. Davis became a leader among his colleagues, and a strong advocate of much needed reforms in medical education.

Between the years 1830 and 1845 the number of medical colleges in the United States nearly doubled. As there was no concerted action between the schools and the profession this rapid increase of competing schools furnished a formidable obstacle to the cause of improved medical education. Two courses of lectures from thirteen to sixteen weeks were usually required. Dr. Davis served as a delegate from Broome County in 1844, and at once entered upon his life work in agitating the necessity of concerted action to elevate the standard of preliminary and medical education. He introduced a series of resolutions to that effect and was appointed Chairman of the standing Corresponding Committee, to which the resolutions were referred. The following year the subject was again discussed *pro* and *con*, but many of the delegates from the medical schools placed themselves on record as being opposed to such radical changes as proposed by Davis and others. It was at this meeting that Alden March privately suggested to Davis that the objections which were made might be possibly overcome by calling a convention of delegates from all the colleges and thereby inducing the institutions of the several States to act in harmony. A preamble and resolutions for the formation of a National Convention were then immediately prepared and read by Davis. Few of those present and who took part in the discussion which followed were of the opinion that it would be possible to carry the movement into effect. However, a committee of three, composed of Davis, Peter Van Buren and McNaughton, was appointed. The Chairman immediately entered into active correspondence with the officers of the colleges and medical societies and received unexpected encouragement from sources least expected. The animosity manifested toward the ASSOCIATION came principally from the representatives of the medical schools, many of whom were opposed to extension of the lecture term to six months and a higher standard of preliminary education. The medical colleges which openly refused coöperation were those in New York and Boston. It was decided to hold the National Convention in the College Building of the New York University on the first Tuesday in May, 1846. Dr. L. Ticknor in the meantime suggested the advisability of organizing out of the National Convention a permanent National Medical Society. The National Convention was held at the appointed time and was attended by nearly one hundred delegates, representing sixteen different States. Dr. Jonathan Knight, professor of surgery in Yale College was elected President. After completion of the organization of the Convention Dr. Gunning S. Bedford

presented a resolution to adjourn *sine die*, asserting that the Convention did not represent a sufficient number of States. As the mover of this resolution was a member of the faculty of the medical school in which the Convention met, his open opposition came as a great surprise. The motion was lost by a vote of seventy-four to two, the latter being cast by the mover of the resolution and his colleague Pattison. A committee of nine was appointed to frame propositions for discussion and action. Of the propositions presented by the committee the first provided for the organization of a permanent National Medical Association, the next two recommendations related to preliminary and medical education, while the fourth suggested the framing of a code of medical ethics. A number of committees were appointed for the purpose of completing the organization next year and to place the ASSOCIATION at once into working order. It will be seen that the most violent opposition to the organization of the AMERICAN MEDICAL ASSOCIATION came from New York and it, therefore, does not appear strange that years later, after the ASSOCIATION was completed and had demonstrated by the work done and influence exerted, that it was in this same State that a part of the profession rose in open rebellion and seceded. The meeting in Philadelphia in 1847 was held in the Academy of Natural Science, May 5, when the organization of the AMERICAN MEDICAL ASSOCIATION was completed. It was attended by two hundred and fifty delegates, representing more than forty medical societies and twenty-eight colleges, embracing medical institutions in twenty-two States and the District of Columbia. Jonathan Knight was reëlected President. Harmony characterized this meeting. The report on Medical Ethics made by Drs. Bell and Isaac Hayes was full and explicit and was unanimously adopted. In the preamble preceding the Constitution, the purposes for which the ASSOCIATION is organized are declared to be "for cultivating and advancing medical knowledge; for elevating the standard of medical education; for promoting the usefulness, honor and interests of the medical profession; for enlightening and directing public opinion in regard to duties, responsibilities and requirements of medical men; for exciting and encouraging emulation and concert of action in the profession; and for facilitating and fostering friendly intercourse between those engaged in it." The sentiments contained in the preamble show that the founders of the ASSOCIATION were infused with a spirit of enthusiasm and energy regarding the future welfare and usefulness of their profession and laid a wide and firm foundation upon which to build the temple of American Medicine. At this meeting committees were appointed representing the different departments of the healing art which were expected to report at the next meeting. The articles of the Constitution were adopted without much discussion and only a few amendments. The Convention then resolved itself into the AMERICAN MEDICAL ASSOCIATION, and the committee to nominate officers made a report which was unanimously adopted. Dr. Nathan Chapman headed the list of officers. The permanent organization of the ASSOCIATION gave a new impetus toward the formation of State medical and local societies, which soon became auxiliary to the National ASSOCIATION and excited a spirit of scientific investigation throughout the Union. The membership increased very rapidly. At the meeting in Baltimore the following year four hundred and ninety-two delegates were registered, of which number two hundred and sixty-six were in attendance, representing the United States Army and Navy, twenty-four States and the District of Columbia. The annual meetings were held with regularity and with increasing attendance, until the great War of the Rebellion drew a line between the North and South, which temporarily parted the profession. The firing upon Fort Sumter brought on the greatest war the world ever witnessed, which for five long years made the earth tremble and saturated our soil with the blood of those engaged in the deadly conflict. Accounts of battles and rumors of battles filled the columns of our newspapers and furnished the all-absorbing subject of discussion in the home circles, business places, offices, the pulpits and at the seat of war. The brave men in blue and gray fought with a determination that could only be inspired by a sense of conviction of the justice of their respective cause, and born of a spirit of patriotism that has always typified the American citizen. Our profession took an active and honorable part in this terrible contest. The medical schools on both sides became almost depopulated, as many of the students shouldered the musket and hurried with the improvised armies to the bloody scene. The medical officers of both armies, composed mostly of men with a ripe experience as practitioners, but entirely ignorant of the many details required of military medical officers, ministered to the sick and wounded with an efficiency and devotion that challenged the admiration of the world. No armies ever enjoyed to a greater extent the blessings of military surgery. The services rendered by civilians so suddenly pressed into military life did much to mitigate the horrors of the many battlefields, and are remembered with gratitude by many of the surviving scarred and maimed veterans. The work done by the medical officers on both sides will always occupy an honorable position in the annals of military surgery, and in the history of our own country it will remain as a bright spot, a shining star during its most trying ordeal, when the very foundations of our Government were trembling from the desperate attacks of an honorable, well-meaning but misguided enemy.

The ASSOCIATION voted to meet in Chicago in 1865. The War of the Rebellion interrupted the meetings until 1865, when it was practically over, and after a number of adjournments, the ASSOCIATION met in Boston in May, 1865. It required repeated and continued efforts on the part of N. S. Davis to secure a meeting at this time, as the chairman of the Committee of Arrangements was strongly in favor of adjournment for another year. This meeting was attended by two hundred delegates. The only thing which savored of war and which showed the intense excitement which still prevailed and which caused a serious discord was the expulsion from the ASSOCIATION, without trial, of Dr. Montrose Pallen, an alleged sympathizer with the South and who then resided in Canada. Dr. Pallen was charged with the most unreasonable and heinous crime of introducing smallpox among the people of the North and East. It spite of earnest protests by a number of more cool-headed delegates, he was expelled without trial. Seventy of the delegates entered protest against this hasty and unwarrantable action. As the only redeeming feature in this unpleasant episode in the history of the ASSOCIATION, I find that after the close of the war Dr. Pallen

was exonerated and reinstated at the next meeting, which was held in Baltimore in 1866. After the close of the war the delegates from the South at once resumed their attendance, the most cordial relations were restored and many of the largest and best meetings have taken place in Southern cities. The attendance has increased steadily and the influence of the ASSOCIATION has been felt throughout the Union and has extended far beyond the limits intended by its founders. The ASSOCIATION is now in a healthy, vigorous condition, a precious and responsible heritage of its founders. Its membership now consists of nearly nine thousand physicians. The responsibility of its officers and members increases with every additional advantage it offers. Its influence for good will increase with every new membership. Every regular physician practicing his profession owes a duty to the ASSOCIATION, and the least he can do is to join its ranks. There is no reason why, in the course of ten years, our membership should not increase to fifty thousand. It is my duty and your duty to bring within its folds every respectable physician of our acquaintance. Increase the army of regular conscientious physicians, secure concerted action and be helpful in inciting among its rank and file a spirit of scientific investigation, and you discharge a part of the duties imposed upon you by the founders of the ASSOCIATION.

MEDICAL EDUCATION.

One of the principal subjects in view of the founders of the AMERICAN MEDICAL ASSOCIATION was to effect a much-needed reform in medical education, looking toward a higher standard of preliminary preparation, lengthening of the lecture course and a systematic graded course of instruction. These objects have been nearly attained and largely through the influence of the ASSOCIATION. Nearly all of our medical schools, large and small, now require four years' attendance, of eight months each, of a systematic graded course, and with few exceptions furnish adequate laboratory and clinical facilities. Our printed transactions from the beginning of the ASSOCIATION until the present time are loaded down with matter pertaining to medical education. This mission of the ASSOCIATION is about fulfilled. We have medical schools that are on a par with those of the older nations. There is no further excuse for our medical students to seek foreign universities to obtain a thorough medical education. Some of the very best practitioners of the United States are men who graduated in our own schools and who have never left their native soil. It requires no stretch of imagination to predict with certainty that our country will become the center of medical education within twenty-five years and our medical institutions will be sought by foreign nations, as they will in the course of that time furnish facilities for teaching far in advance of those of any other country. Our medical schools are not tampered by politics and they are undergoing a rapid evolution by acquiring unlimited financial resources and by the ceaseless activity, the wide-awake, energetic and enthusiastic practitioners who by hard work, frequent intercourse with representative medical men at home and abroad become model practical teachers. The next function of the ASSOCIATION, as far as medical education is concerned, lies in another direction—post-graduate education.

MEDICAL SOCIETIES AS POST-GRADUATE INSTITUTIONS.

We are all aware of the fact that the best medical education obtainable anywhere is but the entering wedge , the foundation for a broader practical education needed at the bedside, which occupies a lifetime and which is never completed. The diploma from any college is but an evidence that its possessor is prepared to enter with understanding upon this post-graduate study of medicine. The recent graduate has but a faint idea of the limitation of his knowledge when measured with the rigid requirements at the bedside. The successful progressive physician is, and remains, an earnest steady student. He enters at once upon a course of post-graduate instruction in an institution which he never leaves and from which he can never expect to graduate. It is and must be one of the principal functions of medical societies, National and local, to receive the young practitioner and direct and supervise his post-graduate work. The medical societies, large and small, are the legitimate and proper post-graduate medical schools. The policlinics and post-graduate medical schools, which have recently appeared upon the field of medical institutions and which had their origin in this country, have done good work in furthering the objects and directing the ambitions of the progressive practitioners, old and young. They have fostered and favored specialism, and have as often retarded as advanced the true interests of the science and art of medicine and surgery. They never did and never will take the place of the medical societies as post-graduate institutions for the enlightenment and advancement of the great mass of practitioners. Post-graduate medical education must be systematic, graded, continuous and not spasmodic. Is it not true that many city, village and country doctors, after a few years of active practice, tired of the monotony of their work and the severe exactions placed upon the general practitioner, seek one of our post-graduate institutions, after a term of two or three months, receive their certificate printed upon the finest sheepskin, signed by forty or fifty professors, most of them themselves recent graduates and next appear upon the surface as full-fledged specialists? I am willing to accord our post-graduate medical schools a field of genuine usefulness, but they can never take the place of medical societies in imparting and supervising post-graduate instruction. Rational post-graduate work consists in the reading of the current medical literature, in mastering the contents of modern text-books and monographs, the diligent use of the microscope as a means of scientific investigation and as a diagnostic aid, in acquiring and maintaining an adequate practical knowledge in interpreting disease from a bacteriologic standpoint, and a regular attendance of the meetings of medical societies, local, State and National. Not a single day should be permitted to pass without absorbing something useful from the mass of medical literature or the study of some specimen, histologic or pathologic, under the microscope. Application and practice will soon initiate the intelligent seeker of knowledge into a systematic course of study. The fruit of such individual efforts belong to the medical profession and should be brought into the proper channel through medical societies or the medical press. Every recent graduate should affiliate himself with the local, State and National societies, and the time and money spent in attending their meetings will be well invested. He should always be an

attentive listener, and as time and opportunity present themselves, an occasional contributor. There are at present two apparent prevailing evils regarding medical societies as educational institutions; too many societies and too many papers. The multiplication of medical societies of all kinds has gone on with unwarranted speed, and the *furor scribendi* that is prevalent at the present time is unparalleled in the history of medicine. Specialists have their own societies, all of which are doing excellent work. There can not be too much said in favor of city, county and State medical societies, all of which should be in affiliation with the AMERICAN MEDICAL ASSOCIATION, which is now and always will remain the recognized representative body, the final tribunal of the American profession. The organization of district and sectional medical societies is of questionable utility, as these societies detract from the attendance and scientific work of the National associations, and the State and county medical societies. Medical societies are especially intended for scientific work. The great majority of doctors who attend the meetings, do so for the sole purpose of receiving or imparting knowledge. There are, however, men who attend these gatherings from less pure and unselfish motives; they are the political doctors, the wire-pullers who are always on their feet making and discussing motions, offering amendments to amendments, often to the great consternation of the presiding officer and the detriment of the scientific work of the society. These men appear more for the purpose of being seen and heard, to kill time rather than to promote the legitimate work of the society. Every society contains more or less of this morbid material. These men come early and place themselves on record at the very first possible opportunity; they seldom read papers or take part in the discussion of scientific subjects. Some of them have been mayors, aldermen, or if fortune smiled upon their political career, perchance, members of the State legislature. They know something about parliamentary law and are anxious that their more timid and less informed colleagues should know it. The general meetings of the ASSOCIATION have on many occasions resembled more a political caucus or a stirring debate in the Senate or House of Representatives than the calm proceedings of a scientific body. Many valuable hours have been consumed by discussing subjects that should never have appeared. Our constitution and by-laws have undergone so much mending that even those best informed would find it difficult to tell what is old and what is new. Let this part of our work be referred to appropriate committees who take the necessary time and pains to inform themselves correctly and in a calm deliberate way make the necessary recommendations to the society. Let us in the future devote our whole time to scientific work and not tempt the patience of those who come for that sole purpose by the prolonged discussion of business and executive topics that can be done much more satisfactorily in the committee room than the general sessions of the ASSOCIATION. To make medical societies a proper and useful training-school for the practitioner, young and old, the scientific work must be done in a systematic manner. The young graduate with a practical experience dating back two or three years should not feel called upon to appear in any of our sections and occupy our time by relating wonderful cases or a series of daring surgical feats. His maiden efforts belong to the local society, the smaller the better. After a training for five years or more he is then qualified to serve the State medical society in an active capacity, preparatory to his entering the working ranks of the AMERICAN MEDICAL ASSOCIATION at the expiration of six or ten years of active practice. By taking such a course he is adopting a systematic course of post-graduate education and instruction which will slowly but surely bring success and recognition. The ephemeral reputation which occasionally rewards early literary efforts on high-sounding subjects is frequently followed by a depression from which it is difficult to recover. It is the slow growing solid oak, and not the slender poplar that reaches out early for the sky, that offers the greatest resistance to wind and storm. The young physician will do well to select subjects for his early literary work from the primary branches of the science of medicine, anatomy, physiology, histology, chemistry, pathology and bacteriology and reserve his efforts in writing on practical subjects until he has acquired sufficient experience to speak authoratively. By pursuing such a course he will interest and instruct his older colleagues and command their respect and admiration at the very threshold of his professional career. One of the glaring faults of the medical societies of the present day as teaching institutions is the presentation of too many papers. A bulky volume of transactions is no indication of the value of the work accomplished. The papers should be few, concise and thorough, the discussions free and general. It is usually more difficult to discuss a paper intelligently than to write it. It is seldom that in a prolonged discussion the remarks remain limited to within the legitimate limits of the subject under consideration. To discuss a paper properly requires careful preparation. Off-hand statistics must be regarded with suspicion. A sense of honesty should compel participants to report their unfavorable as well as their favorable cases, and to record their mistakes as well as their successes. Embellished, painted statistics, too prevalent at this time from ambitious operators, are dangerous traps and should be scrupulously excluded from the current medical literature. Honesty in medicine, as elsewhere, is always the best policy and will be amply rewarded at the proper time. Clinical reports are valuable when properly made; harmful and misleading when based on superficial observation and written from memory instead of from an accurately kept case-book. The results of postmortem examinations should be given with the same candor as the clinical history and the reasons which lead to the diagnosis and the treatment pursued, as it often furnishes the last argument in favor of or against what was surmised or done for the patient during life.

Scientific work of the Association.—The published transactions and the volumes of the JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION are a mine of information for the general practitioner as well as the specialist, as they contain valuable contributions to medical literature, embracing all the departments of the healing art and the allied sciences. Many of the contributions have found a permanent place in our general literature and must be referred to by authors who write on the subjects of which they treat. It is a source of regret that many of the most important and interesting papers read during the early history of the ASSOCIATION have been buried in the volumes of the transactions. The value of these compendious volumes are as a rule underestimated by medical literary men, and are not consulted and quoted with the

frequency they deserve. No other works contain a more accurate report of the early history of anesthesia. Indigenous medical botany receives well-merited attention. Endemic and epidemic diseases which prevailed in this country at that time are discussed by the most prominent and competent medical men. Surgery is ably represented by a number of the most distinguished surgeons of that period. From the very beginning of the ASSOCIATION hygiene and sanitation were given a prominent place in the proceedings. Anatomy and physiology received more attention then than now. During the early history of the ASSOCIATION the scientific work was done by committees and the reports were read and discussed in the general sessions. The reports were comprehensive and long. W. T. Wragg made the first report of the Committee on Medical Sciences in 1848, which occupies fifty pages of the first volume of the transactions, and embraces the current medical literature of that year in a condensed clear form. The same year the Committee on Practical Medicine reported through their Chairman, Joseph M. Smith, "On the Contagious and Infectious Epidemics." The report was quite a lengthy one and deals largely with the etiology and pathology of typhoid fever. In the same volume the Committee on Surgery gives a detailed account of Brainard's work on the "Treatment of Spina Bifida and Serous Effusions by Tapping and Injections of Tincture of Iodin;" and a very interesting treatise on "Anesthetic Agents."

A special and comprehensivs report on "Anesthetic Agents, Their Mode of Exhibition and Physiologic Effects," by J. R. Bigelow, contains the most authenticated account of the early history of anesthetics and some practical suggestions how they should be administered, which are the safest guides today. The members of the Committee on Obstetrics discussed the "Use of Anesthetics in Labor." Their conclusions are summed up as follows: "The committee do not think it important to express an opinion as to the comparative value of sulphuric ether and chloroform in obstetric practice. While the latter is more convenient, the former is probably more safe, owing to the fact perhaps that it is not cumulative in its operation. They are both efficient and either may be employed at the option of the accoucheur." The Committee on Medical Literature, headed by Oliver Wendell Holmes, gave short abstracts of the more important articles published in the medical journals of the United States during that year and of the works on medicine and surgery by American authors and translators. N. S. Davis writes the report of the committee on "Indigenous Medical Botany," which includes the botanical description, medical properties and uses of Lycopus virginicus, Hamamelis virginica and Cimicifuga racemosa. Adulteration of drugs is treated by T. O. Edwards.

In the second volume Dr. James Wynne makes the "First Report of the Committee on Public Hygiene," which covers 223 pages. In the same volume Francis C. Porcher read the "Report on the Indigenous Medical Plants of South Carolina," which occupies 250 pages and includes a description of 319 plants and their medicinal uses. It was soon found that these lengthy reports, although extremely valuable, did not meet with the requirements of the profession. Consequently, at the Charleston meeting, the standing committees were abolished upon motion of Dr. Isaac Hayes, and upon motion of Dr. G. B. Wood it was Resolved, that a committee of seven be appointed to take into consideration the arrangement of committees for future action, and to report as soon as possible. In accordance with the action of this committee the future scientific work of the ASSOCIATION was to consist of discussions of special subjects selected for the next year. The committee also recommended the appointment of a Committee on Volunteer Communications which should be authorized to award a prize of $50 for each of the essays approved by it, not, however, exceeding five in number in one year. The action of the committee led to the appointment of twenty-seven special committees. This arrangement proved satisfactory for a number of years, when the rapidly increasing attendance made it necessary to do the scientific work in sections representing the different departments of the healing art, adding new sections for the study of special branches as specialism asserted itself. This plan has proved eminently adapted for the needs of the general practitioner, as well as the different specialists. A vast amount of valuable material is brought to the different sections annually by many men, who, at the same time, take an active part in the proceedings of societies devoted to special work. Most of the prominent men in the profession attend our meetings annually and are always sure of bringing the fruit of their labors and product of their pen before an appreciative audience. Our section work is improving from year to year, and has done much toward creating and moulding the medical literature of this country.

Prize essays.—Literary work in this country is appreciated only by the profession, and the only prospective reward is a consciousness of a duty performed and the recognition it may receive from the profession. Government recognition, such a strong stimulus to hard work in many of the countries abroad, is out of question here. For the purpose of stimulating original research the AMERICAN MEDICAL ASSOCIATION during the first few years of its existence took the necessary steps to establish prizes for meritorious literary productions. The origin of awarding prizes for essays was by the following resolution offered by Dr. Alfred Stillé, while Chairman of the standing committee on medical literature at the annual meeting in Cincinnati in May, 1850:

"Resolved, that the sum of $100 raised by voluntary contributions, be offered in the name of the ASSOCIATION, for the best experimental essay on a subject connected either with physiology or medical chemistry, and that a committee of seven be appointed to carry out the objects of this resolution; said committee to receive the competing memoirs until the first day of March, 1851, the author's name to be concealed from the committee and the name of the successful competitor alone to be announced after the publication of the decision."

The Treasurer's report at the next meeting showed that $50 had been paid in through Dr. A. Stillé and $50 through Dr. F. G. Smith; and at that meeting, Charleston, S. C., May, 1851, the first prize was awarded to Dr. John C. Dalton, his subject being "On the Corpus Luteum of Menstruation and Pregnancy." The prize in 1852 was awarded to Austin Flint, who wrote "On the Variations of Pitch in Percussion and Respiratory Sounds, and Their Applications to Physical Diagnosis." The successful competitor the following year was Washington L. Atlee, who presented a notable paper on "The Surgical Treatment of Cer-

tain Fibrous Tumors of the Uterus Heretofore Considered Beyond the Resources of Art."

In 1853 Walter J. Burnett presented a paper on "The Cell, Its Physiology, Pathology and Philosophy, as Deduced from Original Investigations, to which is added its History and Criticism," and received the coveted prize.

The following year the prize was awarded to Daniel Brainard, the most distinguished surgeon at that time of the great and distant West, for his classical paper: "An Essay on the Method of Treating Ununited Fractures and Certain Deformities of the Osseous System." Among the remaining prize essays, the one on "Resection of Joints," by Culbertson, is entitled to special mention for its thorough exposition of this subject and its statistical value.

Prizes were annually offered in the name of the ASSOCIATION until 1880, when at the annual meeting in New York, all previous regulations awarding prizes were abolished and a new system for awarding prizes through the agency of the several sections was adopted. Since that time no essays have been offered and no prizes awarded.

It will be seen from what has been said, that the prize essays of the AMERICAN MEDICAL ASSOCIATION take a high place in American medical literature, and it must appear plain to everyone that the practice should be resuscitated. Authors and investigators should be encouraged in their work. The awarding of medals and prizes will encourage the younger members of our profession to apply their talent and energy in a proper direction. The recognition by the American profession of the merits of a literary production is a source of greater satisfaction to the author than the gratification afforded by the intrinsic value of the prize.

I would recommend as the greatest stimulus to original research the awarding of an ASSOCIATION gold medal for the best essay on any subject pertaining to the healing art. The gold medal to be offered by and at the expense of the ASSOCIATION. I would suggest that one side of the medal should bear the bas relief of the father of the ASSOCIATION, Dr. N. S. Davis, and the name of the AMERICAN MEDICAL ASSOCIATION; the other inscribed with the name of the successful competitor, the date of the award, with an Æsculapius staff in the center. The ceremony of awarding the medal should be in public on the last day of the meeting of the ASSOCIATION, preceded by an appropriate speech by the presiding officer. The competitive essays should be placed in the hands of a special committee on prize essays three months before the date of the meeting in the same manner as was customary in competing for prizes in the past. It is time that the profession of this city, the home of the distinguished Benjamin Rush, should do something substantial to commemorate his memory. They can do nothing better than to establish at once, before this meeting adjourns, a Rush Memorial prize to be awarded for the best treatise on any subject relating to the science or practice of medicine. This city has the enviable reputation for its distinguished, enthusiastic and wealthy physicians, and I am confident they need only to be reminded of this late obligation to their most eminent colleague of the past to step forward and subscribe the necessary fund of five or six thousand dollars. I am sure if Benjamin Rush had a voice in this matter he would prefer such a monument to one of marble or bronze. I trust that in the near future every section will establish an annual prize. If this is done we may expect a rich harvest of the most valuable contributions to indigenous medical literature.

American medical literature.—During the early history of our country students and physicians had to depend upon foreign authors for their text-books. With the Declaration of Independence came a sense of responsibility to our representative medical men to create a literature of our own. The first timid attempts consisted in translating or editing foreign books. The great evil of this then, and to a certain extent even now too general a practice, did not escape the good sense and keen eye of one of the early members of this ASSOCIATION, whose name has become a household word throughout the civilized world—Oliver Wendell Holmes, who alludes to this subject in the following plain but significant language: "It can not be denied that the great *forte* of American medical scholarship has hitherto consisted in 'editing' the works of British authors. The committee are not disposed to disguise the fact that this business has been carried on in a very cheap and labor-saving fashion. A tacit alliance between writers and publishers has infused the spirit of trade into the very heart of our native literature. The gilt letters of the bookbinder play no inconsiderable part in the creation of our literary celebrities. Sometimes the additions by the 'American editor' have been real and important, often nominal and insignificant." Dr. S. D. Gross, the Nestor of American surgery, and the foremost medical author this country has produced, raised his voice against such a parasitic literature at the meeting of the AMERICAN MEDICAL ASSOCIATION in 1850 by offering the following preamble and resolutions, which were unanimously adopted:

WHEREAS, The interests and dignity of the medical profession of the United States, as well as the true spirit of patriotism and a love of independence, demand that we should use all proper and honorable means for the establishment of a National Medical Literature, and

WHEREAS, We have hitherto paid too blind and discriminate a deference and devotion to European authority;

Resolved, That this Association earnestly and respectfully recommend to the medical profession generally, and to the various medical schools in particular, the employment of native works as text-books for their pupils, instead of the productions of foreign writers.

Resolved, That the editing of English works by American physicians has a tendency to repress native literary and scientific authorship, and ought therefore to be discouraged by all who have at heart the object contemplated in this preamble.

Resolved, That this Association will always hail with satisfaction the reprints in their original and unmutilated form, of any meritorious works that may emanate from the British press.

At this same meeting Dr. G. B. Wood spoke upon this subject and said, among other things: "Our literature will start forward at a rate that will probably astonish the world as much as our profession in the arts, in wealth and in all the comforts of life. It will have the advantages, moreover, of conformity with our institutions. It will intertwine itself with the popular feelings, convictions and habits, imparting to them consistency, strength and durability; growing with their growth, at once giving and receiving support, and, above all other means, adorning, ennobling and strengthening the natural character."

The utterances of these three eminent members of the AMERICAN MEDICAL ASSOCIATION were made at a time when our ASSOCIATION was passing through the stage of infancy, and yet how forcible and positive is

the language pleading for an undefiled, pure American literature. Largely through the influence of this ASSOCIATION their wishes have been realized. Foreign works edited by American authors are becoming fewer year after year, while books written by American authors have nearly displaced English text-books in our college and physicians' libraries. Today the best text-books for students and the safest guides for physicians and surgeons are those written by American authors. We have every reason to take a just pride in the rapidly growing and high standing of our American medical literature. Our foreign colleagues will soon be compelled to acknowledge our literary independence and to recognize more fully the pen-products of American authors. The time is coming and is near at hand when we will be in a position to pay our indebtedness to them and their predecessors with compound interest, and they will follow to a limited extent our example in the past and commence to edit and use American text-books. Let us stimulate the awakening and growing interest of American authors by creating the necessary funds for a number of prize essays and the future distinction and preëminence of American medical literature will be assured.

Journal of the American Medical Association.—One of the potent agencies in the hands of the members of this ASSOCIATION to place American medical literature upon a sound basis is our official organ, the JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION. It should be and already has become the mouthpiece of the American medical profession. It depends for its support, not upon a wealthy publishing firm or drug house, but upon the profession upon which its existence and maintenance depend. It has only one object in view, the advancement of the science and art of medicine and surgery. Its editor is chosen not for his influence to secure a large subscription list, but for his abilities to manage the JOURNAL for the benefit and betterment of the American profession; in other words, not so much for his business as literary attainments. The JOURNAL has become a permanent institution. It has passed through the trial stage; it has become a power for good in the land. It required years of discussion, preambles and resolutions before the ASSOCIATION abolished the publication of its Transactions in volume form and decided to journalize its proceedings together with the papers read in the general and section sessions. The first suggestion to publish a journal was made by Dr. J. B. Flint of Kentucky at the Richmond meeting in 1852, who gave notice of a proposition to amend the Fifth Article of the Constitution, "So as to provide that, instead of the annual volume of Transactions, the ASSOCIATION may establish and maintain a quarterly journal to be a medium for the publication of the proceedings, and of the most valuable contributions of its members; an organ of resolute and impartial criticism, and an efficient exponent and advocate of the views of the ASSOCIATION on medical science, education and ethics."

It required years for this proposition to come into effect, and when finally, largely through the efforts of N. S. Davis, the Society voted to journalize its Transactions, many had serious doubts as to the ultimate outcome of the new enterprise. At the earnest solicitations of the Board of Trustees, Dr. Davis consented to become its first editor, and placed the JOURNAL upon a sound basis. He was followed by J. H. Hollister and J. C. Culbertson, both of whom labored earnestly and faithfully in the trying editorial chair.

The present editor, Professor John B. Hamilton, assumed the responsibilities of the office with an ability and confidence born of thorough preparation and long practice. He took charge of the JOURNAL at a time when it was in a critical condition. He was well prepared for the duties of this position by nature and education. His long and successful career as a public officer, his keen knowledge of human nature, his good judgment and power of discrimination, his classical education, his intimate acquaintance with the history of medicine and his long experience as a teacher of pathology and surgery, had amply prepared him to manage successfully and edit with ability the official organ of our ASSOCIATION. You are familiar with what he has accomplished. The number of subscribers has been increased threefold, the JOURNAL has been increased in size and greatly improved in quality. Under his editorial management it threatens to become in a few years a dangerous competitor to the *British Medical Journal*, which it will soon equal in the number of subscribers and perhaps in influence. The JOURNAL deserves our undivided influence, as it is the organ which strengthens the ASSOCIATION and binds together in one great brotherhood its members, and its columns are largely devoted to the medical literature of our country, of which it has become its foremost exponent.

Code of Ethics.—At the time the AMERICAN MEDICAL ASSOCIATION was organized the profession of our country was in a most trying condition. The standard of medical education was at the lowest ebb. Of preliminary education there was none. Quackery in all forms was rampant, and no restraints to practices of all kinds by legal enactment. Those who had at heart the elevation of the profession had to make some provision in singling out from the incongruous mass the men who were entitled to professional recognition and public confidence. This was done by the founders of the AMERICAN MEDICAL ASSOCIATION by framing a Code of Medical Ethics, which was called for in the preamble introducing the Constitution. The Code of Ethics was framed by a Committee of seven with Dr. John Bell as Chairman, and was adopted in 1847 without discussion and by an unanimous vote. The Code is liberal in tone, lofty in its sentiments. It requires nothing of its devotees but what would be most willingly subscribed to, observed and carried out by anyone who has the true interests of his profession and his patients at heart. Its language is closely akin to that of that great book, the authority of which but few have the audacity to doubt. The language is that of Percival and our own Benjamin Rush. It is a document which is the backbone and corner-stone of the AMERICAN MEDICAL ASSOCIATION. It is the very foundation upon which the ASSOCIATION is built. It is the rock of Gibraltar upon which all attacks have foundered. Remove it and the AMERICAN MEDICAL ASSOCIATION will be no more; let it remain, and it will continue to grow, flourish and exert its influence for good for all time to come. No changes in the Code have been made whatever since its adoption, except the addition of Section or Paragraph 2, under the head of "Duties for the Support of Professional Character," second division of Code. That addition originated from a charge against admitting delegates from the Michigan State Medical Society on account of the Society having elected as one of its delegates Prof. E. S. Dunster, who was represented as engaged in teaching and giving certificates to students in the Medical Department of the

Michigan University knowing them to be intending to practice an "irregular exclusive system of medicine." The charge was made near the close of the annual meeting in 1877 and referred to the Judicial Council, but too late for the latter to investigate and report at that meeting. At the meeting in 1878 the Judicial Council made an explicit report, declaring that the Code of Ethics contained *no provision* touching the subject under consideration. After much discussion, the members of the Judicial Council were appointed a special committee to report such an amendment to the Code as would cover the subject. Accordingly, at a later stage of the same meeting, the committee reported a paragraph to be added to the first section of the second division of the Code, under the head of "Duties for the Support of Professional Character." But the President decided that amendments to the Code of Ethics must be subject to the same rules as amendments to the Constitution, and the ASSOCIATION acquiesced in his decision. Consequently the proposed amendment or addition to the Code was laid on the table until the next meeting, which was held at Atlanta, Ga., May, 1879. At that meeting the amendment was taken from the table and briefly discussed, and again laid on the table until the next annual meeting. The next meeting was held in New York, June, 1880, and the amendment to the Code seems to have escaped attention until near the time of final adjournment, when, on motion of Dr. Foster Pratt of Michigan, it was postponed and made a special subject for consideration at 10 o'clock of the second day of the next meeting, which was held in Richmond, Va., May, 1881, and at the appointed time the proposed amendment was taken up, and it was discussed in opposition to Dr. E. S. Dunster and H. O. Marcy, when further consideration was postponed until 12 o'clock the next day, at which time it was taken up and advocated by N. S. Davis and opposed by Dr. Dunster, and again postponed until the following morning, when a substitute was offered by Dr. J. S. Billings, seconded by Davis, which was adopted by a three-fourths vote of the ASSOCIATION. (Trans., Vol. xxxii, pp. 38, 39.)

It is evident from the lengthy and complicated proceedings necessary to make this unessential addition to the Code of Ethics, that the American profession fully endorses the action of the Committee which drafted it, and are unwilling for any alterations or additions to be made. The Code has fulfilled the purposes for which it was intended, and will remain a *noli me tangere* for generations to come. I am sure that this feeling will prevail at the centennial celebration fifty years from now, and that our successors will be grateful to us for handing it down to them in an unmutilated form.

Rush Monument.—I have mentioned Benjamin Rush in this address in various connections, but I feel constrained to refer to him once more regarding a movement initiated by Dr. A. L. Gihon to erect to his memory a suitable monument in the City of Washington. The City of Washington is embellished and graced by many statues of the men whose lives are part of the Nation's history. The services of Presidents, heroes and patriots have been commemorated by the erection of statues of marble and bronze, the gift of an appreciative and grateful people Law and science have been recognized in a similar manner by the erection of monuments or costly oil paintings to the memory of the leaders in the legal profession, and the exponents of science and art, as a token of respect by the legal profession and the devotees to art. Religion and philanthropy are represented among the group of statues as an evidence of gratitude to representative men who devoted their lives to the church and the welfare of the needy. It is only recently that the disciples of Hahnemann have erected a beautiful statue to the memory of the erratic renegade of the regular medical profession, the founder of a medical sect who originally attributed nearly all disease and suffering to the acarus scabiei, and pretended to cure disease by producing a duplicate with high potency dilutions and triturations. What have the people done to immortalize the name of the greatest physician this country has ever produced, the man who had the honor and courage to sign the Declaration of Independence? Nothing, absolutely nothing. Is it not time that the AMERICAN MEDICAL ASSOCIATION should take hold in earnest to correct this wrong and remove from the medical history of this country a blemish that has been permitted to remain too long? Can we afford to let this semi-centennial celebration go by without securing sufficient funds to erect a suitable monument to the memory of Benjamin Rush? No! a thousand times no! The time is at hand to act and not to talk. Dr. Gihon has labored incessantly for a number of years in this worthy cause, but he has not met with the encouragement he had a right to expect. In 1884 he introduced a resolution at the annual meeting which was held in Washington, which had for its object the appointment of a committee to report at the next meeting as to the advisability of erecting a monument to Benjamin Rush in the City of Washington, as commemorative of the part taken by the profession of medicine in the establishment of the Republic of the United States. The resolution was unanimously adopted, and the President, Austin Flint, appointed a committee of seven with Dr. Gihon as chairman. This committee reported favorably upon the proposition at the next meeting, which was held in New Orleans. It was the desire of the committee that the statue should be completed and dedicated with appropriate ceremonies coincident with the meeting of the International Medical Congress at Washington in 1887. It was originally resolved that the necessary funds for the erection of the monument should be obtained by subscriptions limited to $1, from each physician and student of medicine in the United States, and by voluntary donations of such additional sums as might be tendered by persons interested in the work. The burden of work in accomplishing this purpose has been consigned almost exclusively to the shoulders of the enthusiastic and energetic mover of the proposition—Dr. Gihon. Year after year he has addressed the members of this ASSOCIATION in the most earnest and eloquent language, pleading the cause which has possessed his body and soul. He has written thousands of letters and spent a small fortune in purchasing postal stamps, and what has been the result of his thirteen years of faithful endeavor in accomplishing a task that ought to have been performed before this ASSOCIATION was born, the erection of a monument to our immortal patriot-physician, Benjamin Rush? He only asks $40,000, and of this sum, by constant appeals in this ASSOCIATION, State medical societies and the medical press, he has received up to date less than $4,000. It has been well said that "Dr. Gihon deserved to have a monument himself for his efforts." But Dr. Gihon's labor is an unselfish one; he looks for no other reward than the con-

sciousness of having done his duty. What he does want, however, is that the profession sustain and aid him in this noble enterprise. No wonder he has often been discouraged, his patience has been severely tried, and it is time that we should hasten to his rescue. The necessary funds should and must be raised during the present session, or at any rate during the semi-centennial year. Loosen your purse strings and let the people of this country know that the profession is loyal to one of its greatest lights. See to it that the capital city will soon be graced by a magnificent statue of the idol of the American profession, the patriot-physician, and one of the greatest benefactors of our country—Benjamin Rush.

Prominent deceased members of the Association.—I have incidentally alluded to a number of the founders and prominent members of our ASSOCIATION. On an occasion like this it is appropriate to mention additional names of deceased members who took a most active interest in its organization and proceedings. Time does not permit to enumerate the names of all who deserve a permanent place in the memories of those who have enjoyed the privileges of the ASSOCIATION since their time. Among the physicians the following merit special mention:

Askew, H. F.	Griscom, John H.
Arnold, Richard B.	Hartshorne, E.
Bowditch, H. I.	Haxall, R. W.
Bache, Franklin	Holmes, Oliver Wendell
Blatchford, Thos. W.	Ives, Eli
Bartlett, J. K.	Johnson, H. A.
Brodie, Wm.	Jones, Joseph
Bowling, Wm. K.	Jackson, Samuel
Butler, S. W.	Lindsley, J. B.
Beck, John B.	Lee, Chas. A.
Bell, John	Mendenhall, Geo.
Clark, Alonzo	McNaughton, James
Comegys, C. G.	Palmer, A. B.
Chapman, Nathaniel	Pitcher, Zina
Clymer, Meredith	Parish, Isaac
Cooke, James	Smith, Francis Gurney
Dunn, Theophilus C.	Swett, John A.
Delafield, Edward	Stewart, F. Campbell
Drake, Daniel	Stearns, John
Dixon, Samuel H.	Thayer, Samuel W.
Elliott, Elsworth	Toner, Joseph
Francis, J. W.	Van Dusen, Harmon
Flint, Austin	Wood, Geo. B.

Anatomy and physiology are well represented by

Dalton, J. C.	Horner, Frederick
Draper, J. W.	Wistar, Casper

Of the surgeons who made a deep impression on American surgery and who fostered the AMERICAN MEDICAL ASSOCIATION, the following brilliant array of names grace from time to time the proceedings of our ASSOCIATION:

Agnew, D. Hayes	Norris, G. W.
Brainard, Daniel	Pope, Chas. A.
Buck, Gordon	Pancoast, Joseph
Briggs, W. T.	Pancoast, Wm.
Bigelow, A. J.	Parker, Willard
Carnochan, J. M.	Post, Alfred C.
Campbell, Henry F.	Richardson, T. W.
Dawson, W. W.	Stevens, Alex. H.
Eve, Paul F.	Smith, R. N.
Gross, S. D.	Stone, Wm.
Gross, S. W.	Smith, H. H.
Hamilton, F. H.	Wolcott, E. B.
Hodgen, John T.	Warren, John C.
Knight, Jonathan	Watson, John
March, Alden	Watson, A. B.
McDowell, Joseph W.	Wood, James R.
Mussey, Reuben D.	Yandell, D. W.

A number of the members of the AMERICAN MEDICAL ASSOCIATION have done pioneer work in the development of rational gynecology, and the names I shall quote now are frequently met with in text-books on diseases of women here and abroad:

Atlee, Washington	Drysdale, Thos. M.
Atlee, John L.	Goodell, Wm.
Byford, Wm. H.	Kimball, Gilman
Battey, Robert	Lente, Fred D.
Dunlap, Alexander	Sims, Marion

American obstetrics was advanced and honorably represented by

Barker, Fordyce	Meigs, Chas. D.
Channing	Miller, Henry
Elliot, G. D.	Storer, D. Humphrey
Hodge, Hugh L.	White, J. P.
Howard, W. T.	

Richard J. Dunglison, treasurer of the ASSOCIATION for a number of years, is best known as the author of a medical dictionary which has served a useful purpose to students and physicians for half a century. Isaac Hayes, one of the most influential members of the ASSOCIATION, was a distinguished oculist and editor of the *American Journal of the Medical Sciences* for many years. I might continue to enumerate the names of additional illustrious members of our ASSOCIATION, but enough has been said to show that much scientific work has been done by many distinguished members of our profession through the AMERICAN MEDICAL ASSOCIATION. The AMERICAN MEDICAL ASSOCIATION has been a post-graduate medical institution in which most excellent work has been done, the influence of which has extended far beyond the limits of our own country.

I have attempted to give you a brief account of what has been accomplished by the AMERICAN MEDICAL ASSOCIATION during the first fifty years of its existence, but it is impossible to estimate the benefit derived by the thousands of members who have attended its meetings, men who have contributed little or nothing, but who have been attentive listeners, and who never failed in returning to their homes with knowledge increased and renewed enthusiasm in resuming their responsible and onerous duties. At each meeting new friendships have been made and old ones renewed and more firmly cemented. One of the pleasant and attractive features of our annual meetings is the free social intercourse between the members, coming as they do from all parts of the Union. The social element of our gatherings should be encouraged and I know of no better way in which to foster it than to establish a new departure by making provision and establish the custom of making arrangements for the evening of the second day of our meeting for an

Association dinner.—The Committee of Arrangements are always severely taxed in procuring suitable entertainments for the members at each annual meeting. Much time and money have been spent for this purpose and all of us can testify to the lavish hospitality extended year after year by the local physicians and public spirited citizens. The evening receptions have been enjoyable and conducive in bringing the

delegates and members in closer contact. But I am sure you will all agree with me that they can not take the place of an ASSOCIATION dinner in making strangers friends and in affording the best possible opportunities for an interchange of ideas and experiences often of much more value than in listening to the reading of a scientific paper. Let us relieve our Committee of Arrangements of the greatest burden of their work and take the necessary steps to become independent, as far as our social enjoyments are concerned, by gathering around the festive board at our own expense. Section dinners have been a failure and should be abolished. Let us have a dinner where the sturdy country physician can sit with his more nervous and excitable colleague from the city, where the surgeon can meet the physician, the physician with the specialists of all kinds, that is, an easy, informal commingling of the different professional elements. Occasions like these could not fail in strengthening the ASSOCIATION and in diffusing knowledge not obtainable in any other way. The great medical societies in England and Germany have followed this custom for years, and the annual dinner is always looked for with anticipations of pleasure and profit. Let us imitate their example and I am confident we shall never regret the departure. It will not be difficult to furnish a mental feast for the guests by a number of well chosen toasts to be responded to by some of our members and representative men from the clerical and legal profession. Medicine, law and theology, the three great learned professions, have many things of common interest, and a closer acquaintance and relationship will prove of mutual benefit to all.

Annual addresses.—The scientific work in the general sessions is largely limited to the reading of addresses on medicine, surgery and State medicine. These addresses, as a rule, are carefully prepared and are always listened to with interest. The Chairman of each Section prepares an address which he delivers at the opening of the section over which he presides. A distinction should be made in designating the work done in the general sessions and in the different Sections, and I would respectfully suggest that the addresses delivered in the general sessions should be known as orations, instead of addresses, and the persons delivering them as orators, to still further distinguish them from the Chairmen of the Sections and their work.

Evening demonstrations.—It has occurred to me that the third evening of each session should be devoted strictly to scientific work of a special character. It seems to me that nothing would prove more profitabte and attractive than a lecture on bacteriology, histology, normal or morbid, illustrated by magic lantern pictures from photomicrographs, projected upon a screen. The lecturer should be chosen by the Nominating Committee from year to year. We have an abundance of men well qualified for such a task within the ranks of our ASSOCIATION. A lecture of this nature, with numerous illustrations, would secure a large attendance and would be one of the means of keeping our members informed of what pure science is doing for the healing art.

Permanent home of the Association.—One of the present needs of the ASSOCIATION is a permanent home, with an editorial office and press room, for its official organ, a hall for the meetings, at least every three years, which could also be utilized for the meetings of local societies, a library room for American medical literature, and a memorial hall for paintings, busts of distinguished members of the ASSOCIATION, and a room for a collection of indigenous medical plants and surgical instruments, the invention of American physicians and surgeons. The site for such a home should be decided by vote of all members of the ASSOCIATION. The present financial status of the ASSOCIATION justifies the taking of the necessary steps to bring such a project into effect at an early date. I am sure the profession of the city that will be honored by becoming the site of such a wonderful institution will contribute liberally toward erecting and maintaining it. Such a modern Æsculapian temple would soon become the Mecca for those in search of American medical literature, and a rich storehouse for everything pertaining to the medical history of this country.

A glimpse of the future.—Fifty years of steady growth has made the AMERICAN MEDICAL ASSSOCIATION strong. It has passed the experimental stage; it has done a great deal in advancing and diffusing medical knowledge, and in the prevention, alleviation and cure of disease. It is the recognized final tribunal which directs and controls all other medical societies and medical educational institutions. It is the final Court of Appeals to which the regular practitioners and the public can look with confidence for the enforcement of a pure discipline and needed protection. It is the highest post-graduate medical institution in this country which without tuition provides a course of instruction annually of a scientific and practical character, well adapted for the busy practitioner, from which everyone returns with a firm determination to do more and better work. It is the great bond of fraternal union which binds and cements together the physicians and surgeons and devotees to special departments of medicine and surgery. The ASSOCIATION has done much for the profession and the people in the past, it can and will do more in the future. The organization is now completed and in excellent working order. We can devote in the future all of our time to scientific and practical work. The increase in membership during the last two or three years is unparalleled in the history of the ASSOCIATION. An awakening interest in the usefulness and prosperity of the ASSOCIATION is noticeable on all sides. The papers read in the sections and the discussions are becoming better from year to year. The fiftieth birthday of the ASSOCIATION will give a new impetus to the work and growth of the ASSOCIATION. It is difficult to foretell the possibilities of the second half of the first century of the existence of the ASSOCIATION. It is, however, safe to predict that when the first centennial celebration will be held in this city fifty years from now, the membership will have increased from 9,000 to 75,000 or 100,000, and our official organ at that time will be recognized the world over as the most enterprising and best medical journal. Few, if any, who, constituting my audience today, will live to see that day to bear testimony of the proceedings, festivities and incidents commemorating the first semi-centennial. The President who will then occupy this Chair and who probably at this time is laboring with his lessons in arithmetic, spelling, geography and grammar in some public school will then review the work of the ASSOCIATION for the first century, and may we trust from the records we shall leave behind that he may adjudge us faithful

servants in the cause of science and humanity. Taking up the thread of history from this day he will chronicle inventions and discoveries of which we have now no conception. The literature of today will be as old and useless as that of fifty years ago. We have the satisfaction of have been permitted to live and labor at a time when the science and practice of medicine and surgery were undergoing a complete revolution. We are now laying the cornerstone and are slowly but surely building the foundation for rational medicine and surgery. The work of the next fifty years will no doubt contribute much toward making what has been sought for ages in vain, the rendering of medicine and surgery exact sciences. The American profession will contribute liberally toward accomplishing this object.

In conclusion, let us implore Almighty God to shower the richest blessings upon the AMERICAN MEDICAL ASSOCIATION and the labors of all and every one of its present and future members. May it please Him who, during His earthly career, went from place to place as the Great Physician to heal the sick and maimed, through His boundless mercy and tender sympathies for suffering mankind, to so guide our lives and labors as to imitate His inspiring example in relieving suffering and in adding to the happiness of our fellowmen.

RECIPROCITY IN MEDICAL LICENSURE; A PLEA FOR INTERSTATE INDORSEMENT.

Presidential Address before the National Confederation of State Medical Examining and Licensing Boards, at its Seventh Annual Meeting, held at Philadelphia, Pa., May 31, 1897.

BY WILLIAM WARREN POTTER, M.D.

EXAMINER IN OBSTETRICS, NEW YORK STATE MEDICAL EXAMINING AND LICENSING BOARD, BUFFALO, N. Y.

For the second time it becomes my duty to assume the functions of presiding officer over the deliberations of this Confederation, and I beg at the outset to offer you my best thanks for this renewed mark of your favor.

Since our meeting at Atlanta last year the Confederation has suffered beyond measure in the death of Dr. Perry H. Millard, of St. Paul, one of its most able and useful members. Since the death of Dr. Rauch, I know of no one whose counsel has been so necessary to our welfare and of none whose devotion to the interests of the organization has been greater. It was my sad privilege to visit him at Johns Hopkins Hospital only a month before his end and then, though feeble in body, his clear and active mind was busy with the affairs of this Confederation; and especially with the report of the committee on minimum standards which he, as chairman, hoped to make at this meeting. But his final summons came on Feb. 2, 1897, when this accomplished physician and useful citizen passed to his immortality. "His spirit was twenty, his years were fifty, but, alas! his body was eighty. Farewell."

At our meeting last year it seemed proper to explain in considerable detail the objects of this organization in order that there might be no misunderstanding as to its purpose. For some time previously the medical schools, or at least some of them, had looked with oblique eyes upon our movements, fearing possibly that we might be scheming to interfere with their prerogatives in the educational field. At first, too, some of them were inclined to criticise the provision made in most of the States that teachers in medical colleges shall not be eligible to appointment on examining boards. The wisdom of this proviso, however, must be apparent to every thinking man. No one disputes the fact that there must be absolute impartiality in the examinations; but how could this prevail if college teachers were made members? Obviously, one college would be jealous of another, and there would be no end of criticism and contention over the work as well as the representation on the boards; especially so in those States in which there are several schools. It was further alleged in some quarters that none but teachers were competent to prepare questions or mark answers. The absurdity of this suggestion has been abundantly proven. As a matter of fact the test of the State examination is different from that applied to undergraduates. The State examiners must by a few well chosen and comprehensive questions in each topic determine a man's general fitness to practice the science and art of medicine. They must so frame the few questions they are permitted to ask and which there is but scant time to answer so as best to develop that fact in a general way. On the other hand, teachers having been in close relationship with their pupils for three or four years merely examine upon the subjects in which they have given instruction; they often ask categorical questions or those admitting of incomplete answers —a defect that is expected to be supplied in answer to the next question, in further elaboration of the subject, which is easily understood to follow. This method is quite right and proper in a teacher's relation to the pupil or the candidate for the doctorate degree, but not admissible from our standpoint. Here each question must be clear, comprehensive and complete in itself, not susceptible of being answered by "Yes" or "No." Ours is, or should be, essentially a post-graduate examination.

In order to test this matter I have asked teachers in a few instances to submit groups of question; but I have found them, speaking generally, not adapted to the State test although quite satisfactory to ask at pass examinations or of candidates for the doctorate degree. A State examiner will soon acquire the skill of asking the sort of questions best adapted to his work, especially those that will best test the quality of instruction the candidate has received. Once this important knowledge is obtained his services become of incalculable benefit to the State and he should be retained as long as he will consent to serve.

Another fear of the schools was that the high standards would empty their benches or that there would be such a diminution of pupils as to materially deplete their incomes. Quite the contrary has been the fact. Bellevue, at New York, graduated a larger class this year than in some years past and its lecture rooms are reported to have been full. The College of Physicians and Surgeons (Medical Department of Columbia University) has found it difficult to provide room for its overflowing classes. In the city of Philadelphia, which since an early day has been a center of medical education, the schools are full even to embarrassment. In Buffalo the University Medical College never had so many matriculates nor so large a graduating class as this year; and so it is wherever high standards have been adopted. The explanation is not difficult; students want the best; it costs them no more in the end and serves them much more satisfactorily in their early struggle for recognition and professional favor,

as well as in maintaining a high position in later years.

It was made apparent at our meeting last year that the examiners compare favorably in education and *personnel* with the professors with whom we were assembled in joint session; and I hardly think it likely that we shall again hear the challenge, given probably more to cover a retreat than a mask an advance, "Who shall examine the examiners?" The answer, were one necessary, is not difficult to find; for the self-same authority that examines the examiners will no doubt find it an agreeable duty likewise to examine the professors.

No! there is no disagreement between the college faculties and the State examining boards, for it has been clearly demonstrated that they are friends. Their interest are common and their objects one. They must not be drawn into antagonism by the indiscreet utterances of a few misguided though well meaning persons. Each is working in separate yet contiguous fields and all are striving for the same purpose, namely, to obtain the best possible equipment for every man and woman sent out over this broad land to practice the profession of medicine.

There is then less occasion for extended remark now than heretefore, as I have already intimated; hence I shall address myself to the discussion of a single topic; one, however, of paramount importance.

INTERSTATE EXCHANGE OF LICENSES.—THE PROBLEM.

There are at this moment two questions pertaining to State control of medical practice that seem to tower above all others in the minds of many physicians, which demand our most careful attention and challenge our deliberate judgment. The two are, however, so inseparable that in reality they may be considered as integral parts of one subject and discussed together. I refer to, 1, minimum standards of requirements to enter upon the study of, acquire a diploma in, and obtain a State license for the practice of medicine; and 2, to the interstate indorsement or recognition of licenses so that, under prescribed rules, a licensee of one State may be permitted to practice in any other State in which he may seek a temporary or permanent residence.

It goes without saying that an exchange of these official courtesies between the States "is a consummation most devoutly to be wished" by every friend of State control in medicine. It is one of the principal objects that this Confederation is laboring to accomplish. It is at the same time one of the most difficult problems thrust upon us for solution. No one can deny the fact that it is pleasant to contemplate a time—I trust in the near future—when we may have a National registration bureau where every legally qualified reputable physician may be recorded, and when all physicians whose names appear on this register and whose licenses are properly indorsed by the registrar, may pass from one State to another in the practice of their profession and in the enjoyment of all the privileges thereto appertaining. But how is this to be established with celerity and with justice to all concerned? The idealogues who were chiefly interested in the agitation of the question of reciprocity of licensure, assert that unless an interstate exchange is arranged, and that speedily, the whole system of State control in medicine will go to the wall. Whether this is given out in the nature of a threat or a prediction I know not, but there are indications that lead me to suspect the former. These men I believe are, for the most part, specialists who spend the vacation months at summer resorts, watering places, or on comfortable farms that their plethoric purses have secured in States more or less remote from their homes. They expect to make a snug sum from consultations and office patients during the vacation season, but do not relish the idea of being compelled to "undergo the nuisance of examinations" as they characterize it, in the States they have chosen for their holiday practice. They are frequently men of influence who seek to prejudice their medical friends against the system, by pointing out what they are pleased to term the injustice of applying the State laws in their cases, and then proceed to air their grievances in the columns of medical journals as a court of last resort. While I have no doubt that the denial of reciprocity now and then works hardship to deserving men who perchance must change their residences, but can ill afford to spare the time and money to take a new examination, I yet fail to see wherein the class of men first above referred to and who prate the loudest about it are deserving of special sympathy. They can well afford to submit to an examination in the States where they pass a profitable and easy summer; moreover, I am unable to discover any injustice in compelling them to comply with existing laws. Shall a State require of its own citizens a compliance with its practice laws and at the same time grant to the well-to-do summer specialist exemption from their operation? As the State laws, for the most part, forbid discrimination against the inhabitants of each, there is both a moral and a legal bar to such exemptions.

EQUALITY OF STANDARD A BASIS FOR RECIPROCITY; THE OBSTACLES.

The only equitable basis upon which reciprocity can be established that appears both feasible and practicable, is that of equality of standards for admission to the study and practice of medicine. This implies an equalization of the preliminary requirements of medical students and a uniformity of applying the tests; a uniform period of collegiate training including uniformity of methods of teaching; and, finally, an absolute similarity in the methods of conducting State examinations and granting licenses. A minimum standard of preliminary qualifications is important to agree upon. This ought to be done in a uniform manner by all the States for the sake of the good name of our profession even if there were no other cogent reasons demanding it. American medicine ought not to be disgraced any longer by illiterate physicians; hence illiterate students ought not to be admitted to our medical schools. If we can not agree upon any other question we ought to demand this much as a united profession.

What, then, shall be the minimum limit of education below which a student of medicine shall not be accepted? No more important question awaits answer but it is one on which, I am sorry to say, there is much diversity of opinion. If a man's mind has not already been disciplined to the extent of acquiring a good English education before he takes up the study of medicine, it presents a sorry foundation upon which to engraft a knowledge of such a multiform science and art. It is far more important, in my view, to agree upon a reasonably conservative standard of minimum requirements than it is to insist upon extending the terms of medical teaching to four years;

since it is better to teach three years of medicine to a well-trained mind than to demand four years' training of an illiterate student. I hope this cardinal principle can be definitely settled to the satisfaction of all the States at an early day.

But let us pass to the next topic, namely, uniform periods of collegiate training. Here, fortunately, there is less diversity of opinion, thanks to the good work of the Association of American Medical Colleges. Under the stimulating influence of the American Academy of Medicine, well seconded as I believe by this Confederation, we find a public sentiment fast settling to the conclusion that four years is quite short time enough in which to acquire the proper training and knowledge to fit one for the doctorate degree. It must be remembered that it is required nowadays of the undergraduates to pursue courses in anatomic, physiologic, chemic, biologic, pathologic and bacteriologic laboratories, and to undergo training in medical, surgical and obstetric clinics. Add to this the necessary didactic and recitative courses besides training in special techniques—microscopy, ophthalmoscopy, laryngoscopy and the like. With all these, besides much other information that must be acquired, and who shall say that four years is too long a time to devote to college work? It would be interesting in this relation to trace the progress that has been made in the last quarter century in the various departments of medicine; but this is as familiar to you as to me. You know how the complexity of the present age with its rapid transit and instantaneous methods of communication, has correspondingly increased the assaults by the enemies of health that are multiplying with such marvelous rapidity. To meet this complexity requires a mind more deeply and broadly cultivated; preparations for receiving and utilizing medical instruction must be increased and lengthened. As our cultivation develops our immunity from disease lessens, hence our vigilance and efficiency must be greater, our period of preparation longer, and our training increased in length, depth and breadth. It is therefore, with pleasure that we observe and heartily approve the good work of the Association of American Medical Colleges that is arranging the curricula in such a manner as will be adapted to the environment of the present day. In this relation it would also appear essential that methods of teaching should be reduced to a degree of uniformity that heretofore has not been attained. With a universal establishment of four years' courses in American medical colleges, it will become appropriate for them to grade their curricula to as near a common level as may be consistent with surrounding conditions. Methods of teaching in all the laboratory departments could easily be conducted on a scale of similarity that would make them practically uniform in all colleges.

The third condition to be standardized is one that immediately concerns this Confederation and it becomes us to deal with it in a most thorough-going manner. The first step toward equalizing methods of applying the separate examination for license in the several States, it seems to me, is to bring the examiners together on the subject. If they can be made to agree upon questions concerning their all-important function, then we have gone a long way toward establishing uniform methods. If, however, they differ in opinion as to the applicatian of the principle in the several States, then the prospect for speedy adjustment presents a more discouraging view. The first point that offers itself is so plain that I am sure no one will attempt to dispute it. The foundation principle of a separate examination for license to practice, is that it shall be applied to all with absolute impartiality; there must be no exceptions to the rule—no exemptions. While it is true that a law on this subject can not be made retro-active and that all legal practitioners at the date of its passage must continue to be so recognized, yet all others must be examined; and so the work must continue from year to year. Another inflexible rule that ought to prevail is that a diploma from a registered school should be demanded as a passport to the State examination. The logical conclusion is that a State examination is supplemental and consecutive to that of the schools, and that it should be refused in all cases where applicants are not holders of legally obtained diplomas from registered and recognized colleges. If this rule were scrupulously enforced it would deprive medical college faculties of grounds for any further opposition to State control. If, on the other hand, any of the State examining boards are permitted to examine undergraduates for license, it enables them to set up a standard of their own, which is antagonistic to the underlying principle of State control and, I fear, subversive to the best interests of reform in medical education. When the duties of medical examiners are reduced to the mere question of determining the qualifications of such individuals as legally constituted schools shall turn over to them with M.D. degrees, they will have served the whole purpose for which they have been created. It is understood that there must be a uniform system of recognizing and registering the medical schools in the several States.

With the foregoing principle once settled the minor details of standardizing State medical examinations for license could be more easily arranged. A uniform system of propounding and marking questions becomes desirable. For instanee, if it could be agreed that ten questions in each department or topic should be asked and that each answer should have a possible value of ten points; and, further, that the total possibilities of the examination should be fixed at 100 points maximum and 75 points minimum in each topic, we could easily approach uniformity in this part of our work. The only remaining important question would be as to the valuation of the answers. This necessarily will always vary in degree, since the personal equation of the examiner enters somewhat largely into its outcome. It is a well-known fact that some examiners are inclined to a high, others to a medium, and still others to a low valuation; but with experience and an interchange of opinion on the subject this factor would soon be reduced to an exiguity that would render it comparatively unimportant.

LEGISLATIVE ENACTMENTS.—THE SOLUTION.

These, then, are the essential steps toward reciprocity; these are the obstacles to be overcome before it can be accomplished. The remedies lie in legislative enactments and these, speaking generally, are of slow development. Nevertheless, with a healthy public opinion once aroused on the subject legislative bodies will soon take heed and adopt adequate measures to overcome defects. The newer States are likely to fall into the front line sooner than the older ones that already have imperfect laws. Public opinion moves faster, and I had almost said in a sounder fashion, as we travel toward the Occident. This in some respects

is no doubt true. Montana, for instance, stands at the forefront in all of its requirements for State license. Minnesota, too, has been a pioneer in the movement for advanced standards and has one of the best laws. Moreover, we may expect those States east or west, north or south, that as yet have no laws relating to medical practice, taking heed of the necessities arising under present conditions and profiting by the experience of those States that have preceded them in relation to State licensure, will soon enact laws that will meet all the conditions of the present day and which will satisfy the most idealogistic views.

At present twenty-seven States demand separate examination for license to practice medicine. In fifteen of these a legally obtained and possessed diploma is the first condition imposed; without it a candidate can not be admitted to the examination. It only remains for these States by statutory enactments to bring their preliminary requirements to a common level, and then for their several examining boards to agree upon uniformity of methods, when, lo, the question of reciprocity is solved! A license granted by one of these States will then be valid in all others of this class, upon proving identity, character and the payment of whatever fee may be imposed. With reciprocity once accomplished between these States, the others one by one will soon afterward establish themselves on the reciprocity basis in self-defense, if for no other or better reason.

Those who most loudly and persistently demand interstate indorsement aim their criticisms at the examining boards, holding them responsible for all their woes; whereas, as a matter of fact, the examiners have nothing whatever to do with the question. They are simply agents of the States to administer the laws as they find them and can not change the practice in regard to reciprocal interchange of registration. The statutes in every instance with which I am familiar merely permit the acceptance and registration of licenses issued by other States where the standards are at least equal in all respects to those of the State issuing the license. This means, if it has any significance whatever, that in all preliminary requirements, in collegiate training, and in State examinations, one and all, there must be an equality and a uniformity of standards before licenses can be accepted for registration in a reciprocal manner.

The precise language of the New York statute on this subject is as follows: "Applicants examined and licensed by other State examining boards registered by the regents as maintaining standards not lower than those provided by this article . . . may without further examination, on payment of $10 to the regents and on submitting such evidence as they may require, receive from them an indorsement of their licenses or diplomas conferring all rights and privileges of a regent's license issued after examination." This principle was reaffirmed in an amendment to the practice law passed March 21, 1896, in the following terms: "New York medical schools and New York medical students shall not be discriminated against by the registration of any medical school out of the State, whose minimum graduation standard is less than that fixed by statute for New York medical schools."

As many other States have enacted statutes fashioned after that of New York, containing this particular proviso, and as still other States hold to the same provision in effect, it is easy to understand how powerless the examiners are in the premises. These demands of the restless and migratory doctors must be taken to the State legislative halls and there made known if relief is expected. Meanwhile, the members of this Confederation may assist in bringing the matter about more speedily by acquainting the legislatures with the difficulties to be overcome and by urgently recommending the adoption of such amendments to existing laws as will meet and remove the present defects.

My object in discussing this subject in detail is to place the examiners right before the country in regard to it and to divert further criticism against the delay of reciprocity into the proper channel.

PROGRESS DURING THE YEAR.

During the past year attempts have been made in nine States and Territories to establish medical examining boards, in four of which efforts have been successful. Those that have joined the list with practice laws are: The District of Columbia, Idaho, Indiana and New Hampshire. The laws of New Hampshire, District of Columbia and Idaho make a diploma from a registered school a requisite to enter the examination. In Indiana the law is modeled somewhat after that of Ohio and is a substantial beginning in a State that has sadly needed protection from charlatans and medical pretenders. So in the academic year just now about to close there has been substantial gain in the direction of State control, even if some important States have fallen "just outside the breastworks." These no doubt will re-form their lines and come to the attack another year with full promise of success. If four States and Territories are added to the list each year, in a short time we shall be able to rejoice in a professional rehabilitation that will compel the admission of the American licentiate to the best medical standing wherever civilization exists.

It seems important in view of the present condition of State control that the committee on minimum standards appointed last year shall be continued as a standing committee of this Confederation, with enlarged powers that shall include the question of reciprocity. I desire to invite your attention to the publication of a brochure entitled "State Requirements for the Practice of Medicine; a Guide to the Qualifications and Methods of Procedure to enter upon the Practice of Medicine in the United States," by Dr. Charles McIntire of Easton, Pa. It constitutes the Bulletin of the American Academy of Medicine for February, 1897, and is by far the most complete publication on the subject yet issued. If secretaries of boards had paid more attention to requests for information the book would have been absolutely accurate up to the date of its issue; as it is, it is surprising how much Dr. McIntire has been able to furnish of value. Every State examiner and especially every secretary should be supplied with this guide and it should be placed on file in all public libraries.

QUESTIONS OF PUBLIC HEALTH ARE INVOLVED.

To return for a moment and finally to the special subject matter of this paper, permit me to say that in any event and under all circumstances the honest and earnest friends of reciprocity may be sure of the active and zealous coöperation of this Confederation in all reasonable efforts to establish it. In most of the States where State license is now required the struggle to obtain even imperfect laws has been prolonged

and the contest has been exasperating as well as fatiguing. Every possible influence has been brought to bear on legislatures to prevent even a conservative recognition of the principle. Nor is this all; after laws have been passed making a good start in the direction of this reform the State medical societies, through whose influence, speaking generally, the measures have been adopted, have been kept constantly on the defensive at legislative hearings and otherwise to prevent amendments to existing statutes that would weaken or tend to destroy their usefulness.

These proposed amendments generally have their origin in spite, malice, caprice or vengeance, and should always be regarded with suspicion by legislative bodies. It will be a happy day for the friends of State license when legislatures can be persuaded to turn a deaf ear to all amendments that are proposed outside of State medical societies or State boards of medical examiners. This would save much time to members of legislative bodies and give security of feeling to the medical profession. If legislators could be made to appreciate the fact that public health interests are involved in the question of State license; that every attempt to weaken the principle is a blow at public sanitation, and that higher standards of medical education mean better health for the people, then perhaps it would be easier to obtain and maintain the necessary laws to protect the commonwealth against that kind of ignorance, superstition or superrefinement that always lurks in the evironment of quackery.

Traveling and advertising quacks, christian-science and faith healers, clairvoyant and spiritualistic mountebanks—these and every other kind of pretender that panders to the ignorance and superstition of the people, leeching their money and sapping their vital force, ought to be no longer tolerated by enlightened communities; and if legislatures would lend a willing hand these villainous enemies of public and individual health and prosperity may soon be disposed of in a fashion becoming an intelligent and progressive age.

284 Franklin Street.

HAS THE MILK LABORATORY COME TO STAY?

Address of the Chairman delivered in the Section on Diseases of Children at the Forty seventh Annual Meeting of the American Medical Association, held at Atlanta, Ga., May 5-8, 1896.

BY A. C. COTTON, A.M., M.D.
CHICAGO, ILL.

Probably at no time in the world's history has the subject of infant feeding received so much attention as at present. The results of bacteriologic research and experimentation have of late given direction to the observations of some of the brightest minds of the profession, and the recent revival of interest in pediatrics has been due to the suggestions of the *preventability* of the disorders of the digestive tract of infants and children. It is not strange, then, that our recent literature teems with contributions on the subject of infant feeding. Some of our would-be teachers are dogmatic and precise in the presentation of their methods, while others are satisfied with the assumption of a merely suggestive attitude toward the subject, while still others present the plea of empiricism and point to results which they do not attempt to explain except upon the ground of experience. But amid all these conflicting theories and opinions, whether based upon chemic, physiologic, natural or empiric reasons, each new theory or procedure is met with the assertion, "I told you so long years ago," which simply goes to verify the old adage, "There is nothing new under the sun," even in regard to the feeding of infants. Meanwhile statistics show, with here and there an exception, perhaps due to our more modern ideas of hygiene, that the high rate of infant mortality still exists as of yore; "the voice of wailing and lamentation is heard throughout the land—Rachel weeping for her children and refusing to be comforted, because they were not." Among the many conflicting statements of the learned physiologist, the expert chemist, the trained bacteriologist and the experienced empiricist, a cursory glance reveals *three* quite well defined classes of infant feeders, viz.: 1, those who regard the early infant as belonging to the carnivora; 2, those who would place the nursling of the human species among the gramnivora, and 3, those wise old experimenters, who seeing in the early young the same dietetic requirements universally attributed to his adult progenitors, place him beyond question in the omniverous class.

"Follow the teachings of nature," says one; "the sustenance drawn from the maternal font is purely animal food, and when that font is prematurely dried the substitute must be obtained from animal sources, preferably the elaborated product of a lactiferous gland, those being preferred which in the constituents of their product most nearly resemble that furnished by nature." The mother's milk is analyzed, the percentages of fat, lactose and proteids determined, and the dogmatic assertion proclaimed that as cow's milk somewhat closely resembled breast milk, cow's milk alone shall be recognized as containing the necessary constituents for infant food. Immediately some sage rises in his place and solemnly says, "I told you so," and echo catching up the words, they reverberate back along the vista of history until it dies away in the old legend of "Romulus and Remus" suckled by a wolf before the days of ancient Rome. Meanwhile the infants die. The bacteriologist comes to our relief, with his demonstration of myriads of *microörganisms* with which the *cow's* milk swarms, and informs us that heat will *kill* the disease germs and we must *sterilize* our milk. Again the voice, "I told you so. I boiled my milk long years ago." Up springs the chemist and says by boiling you lessen the food value of the milk by coagulation of its lact-albumen and the devitalization of its most absorbable portion. The bacteriologist upon appeal shows us how to rid the emulsion of its active pathogenic bacteria by submitting it to a temperature *below* the boiling point. But still the infants die and the curdy stools persist and stimulate the chemist to show us not only the excess of the indigestible casein in cow's milk but its peculiar tendency to the formation of *dense curds* under the action of gastric acids. Then comes the physiologist with his *predigestants;* and the extragastric peptonization of the offending caseous constituents is in vogue. Once more the echo, "I told you so long years ago," even crossing the Atlantic from the realms of the Sultan, pointing to the fermented preparation of matzoon; from the steppes of Russia with its kumyss, and from the plains of Tartary with their kaffir grains. Next comes the swarm of *cerealists,* who, while admitting the indigestibil-

ity of amylaceous substances in the infant stomach, claim that by partial conversion (by the malting process or by heat) of the starch of cereals into sugar we can furnish the baby with proper alimentation for all the requirements for his full development. Grains are plenty and flour is cheap and commercial instinct eager for gain and the land is flooded with "baby foods" as the best substitutes for mother's milk. Again "I told you so" is heard echoing until we learn that from the beginning of history *parched cereals*, powdered and in the form of decoctions, have been used under the name of "baby pap."

"Cane sugar is a poison to infants," declares the physiologist. In refutation of which statement the matron of every Southern and Western cabin points to the lusty nursling contentedly mumbling his "sugar tit" while developing strength and stature like the mammoth weeds of the generous praries. Still in the crowded districts of the metropolis the infant mortality repeats its figures with sickening regularity and the persistent anemias and mal-nutrition of the puny rachitic or scorbutic progeny is charged to the use of the exclusive vegetable or animal diet.

Then clinical experimentation in infant diet, with all its variations and alternations between cow's milk, animal extracts, vegetable decoctions and cereal jellies is inaugurated, and the hoary headed rises up among us and gravely claims "It was thus I did eons and eons ago." Says one theorist, "raw milk is poison;" says another, "boiled milk is indigestible;" says another, "starch is indigestible;" still another, "cereals are unnatural;" again, "cows milk even if freed from its pathogenic bacteria is ill adapted to the stomach of the human infant because its constituents do not bear the same proportion to each other of similar constituents of breast milk." Then are we told to so regulate the relative proportions of the constituent parts of the natural emulsion of the cow's mammary gland as to most nearly approximate the relative proportions of the normal constituents of the product of the maternal breast. "It is as plain as day," said he, "for chemic analysis shows us the average composition of cow's milk to be, sugar 4.50, fat 3.75, albuminoid 3.76 (casein 3.00, albumin 0.76); while the average composition of mother's milk is, sugar 6.50, fat 4.13, albuminoid 2.00 (casein 1.00, albumin 0.55)." The difference is seen in this that cow's milk is acid while mother's milk is alkaline, that cow's milk contains less fat, less sugar and more albuminoid substance than mother's milk. We will regulate cow's milk by rendering it alkaline—a voice from out the solemn past murmurs, "I used lime water years ago." We will add more sugar—the same voice, "We have always sweetened the baby's food." We must diminish the percentage of the proteid substance to get rid of the offending casein. The ancient practitioner mournfully suggests, "I have always diluted the milk with three parts water the first two months, two parts water the next two months, with one part water for the fifth or sixth months, and out of the distant past comes the hollow murmur of "wine whey, rennet whey, cream and water, and the mortality was just the same."

Next, science declares we will separate this cow's milk emulsion into its constituent parts and then we will *reassemble* them in definite and exact proportions, so that our *new* emulsion shall resemble a good average breast-milk, and we will patent the process and call it a "milk laboratory." Then says the old practitioner, "For many long years have I employed that procedure by allowing my cow's milk to stand for hours in a deep, narrow jar until gravity should cause the casein to precipitate and the fat to rise; then carefully skimming the cream, I have with delicacy siphoned off the upper one-third of the milk. With this cream, this upper one-third, plenty of milk sugar, an equal quantity of sterilized water, some aqua calcii and perhaps a pinch of salt have I attempted to approximate mother-milk, but I neglected to patent the process, and the infants died, or their teeth developed slowly or their bones softened and their stools were still curdy."

But, says science, the idea of the milk laboratory is not to secure a uniform product which shall most resemble the average breast-milk, but to furnish different emulsions to meet the *especial requirements of individual cases*. The old practitioner replies, "there is nothing new in this idea; from my youth up I have practiced these precepts. I have increased the fat to attenuate the curds, increased the sugar to correct constipation, also the fat for the same purpose, decreased the solids by addition of water and added cereals to *harden* the bones." What, then, fellow-workers, is the benefit to be derived from the milk laboratory since it brings with it no *new ideas?*

I believe the advantages lie in the direction of *more exact manipulation, greater precision,* greater *accuracy* in the *keeping* of *records*. In fact, the milk laboratory already begins to assume the same relation to the dietitian that the well equipped pharmacy has so long borne to the therapeutist. The busy pediatrician of today can no more depend upon nurses and mothers for the regulation of the infant's food than for the preparation of therapeutic agents from the crude drugs. A definite prescription for the regulation of the necessary constituents of a liquid food to be compounded by a competent manipulator aided by all the requisite paraphernalia for carrying out the physician's idea in the *demand* of the *hour*. I believe the *milk laboratory* has *come to stay*. As far as I can learn all my Chicago brethren who have used our milk laboratories are agreed upon this subject.

The brilliant successes recorded by Dr. Rotch, obtained with modified milk through the Walker Gordon Laboratory of Boston, have stimulated the profession and given a new impetus to the study of infant feeding. We are securing through the milk laboratories at Chicago very gratifying results, of which, I trust, the profession will hear more at an early day. The facility for exact experimentation stimulates closer observation in our efforts to perfect nutrition in the infant. And although one may say nothing new has yet come of it, I believe the future is full of promise. That the efforts of the practitioner through the milk laboratory must be confined to the manipulation and regulation of cow's milk alone, is a mistaken idea that in some way has been associated with the early discussion of this subject. On the contrary, in the milk laboratory the advocates of the employment of cereal products in infant feeding find their best facilities for testing and demonstrating the value of their theories. It was my intention to present two lines of experimentation which have interested me of late at the Chicago Laboratory, but as this paper is already long I will merely mention them, trusting that at a later day they will meet with a worthy exposition.

Your former chairman, Dr. Christopher, and your

present representative, have of late been incorporating in some of their prescriptions for milk mixtures definite quantities of cereal jellies as expressed by percentage of starch. The ingenious experiments of Dr. Leeds of Hoboken, demonstrating the difference in coagulability of the casein between cow's milk and mother's milk, have stimulated our efforts to still further eliminate the casein without reducing the percentage of proteid substances. This we are attempting to do by replacing a large part of the rejected cow proteid with egg albumin. It has been claimed that egg albumin rendered the mixture unstable and that it could not be protected by Pasteurization because of its ready coagulability. We have not found these obstacles to the use of egg albumin to be insuperable, and are today employing the egg to replace the lact-albumin with satisfactory results. At my suggestion, our prescription blanks have been arranged for the addition of egg albuminoids when deemed advisable.

The milk laboratory, I believe, has come to stay.

ORIGINAL ARTICLES.

THE RELATION OF DISEASES OF THE SKIN TO GENERAL CONDITIONS.

Read before the New York Academy of Medicine, April 1, 1897.

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The modern division of the practice of medicine and surgery into many specialties has been a natural and legitimate sequence to the marvelous development of the science and the art of healing which has been made in late years. The sum total of medical knowledge in various lines has now become so great and extended that few if any can hope to compass and apply it to all satisfactorily in a lifetime; and the development of specialism in the medical profession (as in many other branches of science) has both contributed to this development and has facilitated the practical application of knowledge and experience along many lines. The advances which have been made in connection with medicine and surgery, largely by specialization of work, compare favorably with those obtained in other lines of human activity, even in this age of steam and electricity.

But, on the other hand, all thoughtful men must recognize that in this minute subdivision of thought and practice, and in the enormous aggregation of medical knowledge there is a lack of coördination in its practical application which at times results disadvantageously to the patient. Minute and concentrated attention to separate and individual lines of thought and practice has too frequently resulted in a narrowness of thought and practice, which has prevented the physician from properly recognizing, appreciating and applying many of the broader principles of medicine, which are so often of the utmost importance.

This is especially apt to be the case in connection with diseases of the skin, and yet in almost no branch of medicine is the error more serious; and the error has unfortunately spread from the specialist to the general practitioner, until lesions on the skin are now too often regarded as special and local affairs, quite unconnected with disorders of the general system.

The reasons for the neglect of internal conditions of the system in the practice of dermatology are not difficult to discover. Much of the work in this branch has, of late years, been done by those who have devoted themselves to it exclusively, almost from their first graduation; they have had little or no practical experience in general medicine, and as their interest and study has been largely concentrated on the lesions visible on the skin, other broader relations of medicine have naturally become less distinct. The feeling that the skin affection is a local one is also largely shared and fostered by patients, who constantly urge that they are in perfect health, and only desire the removal of the local disease which gives them annoyance. Thus, it happens that more and more attention is localized on the portion of the body that gives offense, and varied local applications are used with more or less satisfactory results, and subsequently recommended to others. The profession is thus taught to look upon local measures as the only important feature of treatment.

It must be granted, however, that clinical experience often seems to give considerable support to the errors thus begun. For undoubtedly, very much can often be accomplished by correct and proper local treatment, and the cessation of this or that eruption under local applications does often seem to warrant belief in their great efficacy. On the other hand there is certainly often danger of error in this judgment. For it is possible, and indeed probable that very frequently the local or other exciting cause which produced the eruption has passed away, and thus the local lesion which was left yields readily to local treatment while the general systemic condition which predisposed thereto still remains; the skin then readily succumbs to a renewed irritant and the eruption recurs again and again, until the conditions of system at the bottom of it are removed. This is well illustrated by syphilis, where local mercurial or other treatment may be successful in removing local lesions, which will reappear again and again until the actual disease is overcome by proper constitutional treatment. In certain instances, as in herpes zoster, the eruption is quite self-limited, and so naturally ceases under any proper local application. How readily could a perfectly ignorant person be deceived on seeing the rash of scarlet fever, measles, chicken pox or variola cease after local treatment; the same error could occur in regard to eruptions excited by certain drugs, as quinin, belladonna, copaiba, etc., after the administration had been suspended.

But belief in a general local pathology and treatment for all diseases of the skin finds a still further support in the fact that there are certain lesions of the skin which are of a purely local nature, and yield readily to local measures alone. Such, for instance, are certain hypertrophic and atrophic diseases, and some new growths, as also the lesions caused by various local irritants and those produced by animal and vegetable parasites. But even in many of these very careful medical study will determine features or elements where the broad principles of general medicine should be applied. A striking illustration of this is found in ringworm in children, which will persist and luxuriate in those of weak constitution or exhausted by mal-nutrition, and yield much more readily when proper internal measures are instituted.

Finally, recent science has been claiming for the class of microbes an important place in the local causation of skin lesions. But it is more than ques-

tionable if, in many instances which have been claimed, they are more than accidental elements, or even the result, instead of the cause of the diseased process. In some instances, at least, it seems highly probable that the parasites generate and operate only because the soil is suitable and has been previously rendered so by other causes which can and should be removed.

I can not more forcibly illustrate my conception of the relations between local pathology and general causes than by reference to some facts in nature. For a long time it was unknown as to what was the real cause of a certain condition or disease in peach trees called "yellows." It is a disease which attacks the leaves, causing them to become yellow and fall off; the life of the tree is thus impaired, no fruit is produced, and before long the tree itself may die. Careful study finally demonstrated that the disease was caused by a fungus parasite invading the leaves, and thus arresting their vital action. Many and varied local remedies were thereupon advised, and much ingenuity expended upon methods of spraying the trees with various solutions destructive to the parasitic growth. While these means are all effective for a time in some cases, in other instances they fail to save the trees, while in many if not most trees the disease recurs again and again, requiring repeated and frequent applications. Finding local treatment to be but temporary and often ineffective, attention was then paid to other and more general points relating to the life and nutrition of the trees, and now, at the present time the best authorittes advise, not the local treatment to the leaves, but improved nutrition to the tree, especially in the way of phosphates to the roots, even though it is yet recognized that the disease on the leaves is parasitic. The increased vitality of the tree enables it to resist the inroads of the parasites which, attacking first the leaves, finally destroyed the life of the tree itself.

At my country home I have a large virgouleuse pear tree which each year has borne a very great number of pears. But when about half grown the fruit becomes attacked by a fungus which thickens and hardens the skin of each pear, and they soon crack and dry up, so that hitherto for many years there has never been a single good pear ripened; the fruit is hardened with deep fissures, and never more than half grown. Finally, I began to systematically reduce the number of pears which were allowed to remain on the tree, removing a third or half of them when they were the size of a walnut, and before showing much signs of the parasite. The result was remarkable. A very great improvement occurred in the remaining fruit, which resisted the parasite very markedly, some of the pears attaining large size and ripening without being cracked and split as formerly. Another year I shall carry the process still further, removing a larger portion of the fruit very early, and the resulting vigor in the remaining portion will enable those that are left to resist the parasite still better. Thus we see the fruit yielding to the attack of the parasite when the strength of the tree was weak from overbearing and resisting it when a lessened quantity of fruit allowed greater vigor to be expended upon each pear.

One more illustration. On a very bad, hilly and stony field on my farm, which had run entirely to red sorrel and brambles, my farmer sprinkled a considerable quantity of wood ashes thickly across one corner. In the following spring this portion was covered with a beautiful carpet of white clover, it forming a striking contrast with the rest of the field, although no clover seed was sown. This clover was reproduced for several years until the fertilizer was exhausted, when the weeds again gained the ascendency and have remained in possession of the spot. We see here that with proper nourishment the clover seeds, which are everywhere present, grow luxuriantly, while with impoverished soil plants of a lower order assert themselves. All are familiar with the growth of moss, both upon dead and dying trees and upon those in poor damp ground, and shut in from sunlight, and how it disappears when the best conditions of life are secured; the mistletoe on the oak flourishes when the soil is damp and on the highest branches, where vitality is least.

Illustrations could be multiplied indefinitely to show the resisting power of health over the germs of disease, and yet the principle seems to be applied very little in diseases of the skin. They seem to be regarded on all sides as something peculiar and distinct from other maladies and subject to different pathologic laws. My plea is that the speicialist and general practitioner should look at them more as other diseases are considered, namely as being largely evidences of lowered vitality and connected with faulty metabolic processes in the system. Time and space forbid me to develop the matter to its fullest extent. But this I do urge: That the patient should be studied in all aspects and treated more on the broad principles of general medicine than simply by the various local measures at the time in vogue, commonly with the addition of arsenic internally. It would surprise the profession could they but know how universally this remedy is given by the general practitioner when anything whatever is wrong on the skin, and it would be even a greater surprise to know to what a very slight extent arsenic enters into the treatment employed by those best acquainted with and most successful in the practice of dermatology.

Much could be written on the evils of narrowness of thought and practice in this branch of medicine, and many illustratious could be given of the harm resulting from not studying cases thoroughly and then treating the patient in the directions indicated thereby, instead of by local applications alone.

As well might the neurologist give temporary relief to headache or sleeplessness by sedatives or hypnotics without searching out and removing the cause; as well might the oculist seek to improve the eyesight by glasses alone when syphilis had altered the deeper structures; as well might the laryngologist only relieve a tuberculous laryngitis by topical applications without seeking to overcome the cause by hygiene and proper remedies; as well might the orthopedist only support a lateral curvature by braces and expect satisfactory results, without employing means to strengthen the weakened muscles on which the condition depended; as well might the gynecologist expect to get good results by local treatment in a leucorrhea which was dependent upon debility and constipation without relieving the underlying causes.

The proper treatment of certain diseases of the skin often involves the most extended knowledge and practice of general medicine; and he but poorly serves his patient who prescribes only a local treatment without fully going into the case and rectifying, as far as may be, the systemic errors which often play a great part in its production and continuance.

It would lead us far beyond the proper limits of this paper to treat fully of all the possibilities which might be presented in connection with the subject under discussion. But I may be pardoned, even if I traverse ground well known to many, in pointing out some of the more common aspects of the subject, as they are presented to me in daily practice. I will, therefore, briefly indicate the lines on which investigation and therapy should be directed in connection with many of the patients presenting diseases of the skin.

How large a proportion of the ordinary run of cases may require general constitutional treatment can be judged from the fact that out of 10,000 miscellaneous skin cases in the writer's private practice, recently analyzed, over 6,000 or more than three-fifths of all belonged to five of the more common inflammatory diseases of the skin, all requiring more or less of general treatment; while there were even less than 1,000, or not 10 per cent. belonging to the three classes of new growths, hypertrophies and atrophies, and only about 10 per cent. of syphilis and parasitic diseases together.

To correctly understand and properly treat a large proportion of the general run of skin cases, therefore, there is need of the physician considering the patient, briefly though it may be, in reference to the action of his entire system. Some of the points to be regarded we will consider under the following heads:

1. Digestive system.
2. Renal system.
3. Cutaneous system.
4. Nervous system.
5. Circulatory system.
6. Respiratory system.
7. Sexual system.
8. Anemia, gout, rheumatism, syphilis, malaria.

1. Digestive system.—It is hardly necessary for me to dwell much on the importance of attending to the digestive system in skin patients, for all will immediately recall the intimate relations which every one must have observed between digestive derangements and the skin; and the subject of auto-intoxication from the products of mal-assimilation has received much attention lately at the hands of Bouchard and others, and merits the most serious consideration.

Urticaria and acne furnish, perhaps, the most striking examples of auto-toxic skin disorder, as they are constantly seen to follow promptly upon digestive disturbances. But the same may often be observed in eczema, while psoriasis will frequently be seen to be more active when these occur, and the itching of pruritus is always augmented thereby; falling of the hair may continually be observed to occur with each attack of dyspepsia and even syphilitic skin lesions will frequently appear aggravated when the digestive functions are disturbed. In many cases, however, the connection may not be very apparent at first sight, and it will sometimes require considerable persistence to establish the digestive derangement which is at the bottom of the difficulty.

Primary digestion, either atonic or fermentative, often due to errors in diet and hygiene, is not very infrequent in these patients, but secondary and intestinal indigestion is more common. It is almost needless to remark that the condition of the tongue often affords a most valuable guide in regard to these disorders, and should always be studied, even when the necessity of regarding this aspect of the patient's condition does not seem apparent at first sight.

Constipation in a varying degree is perhaps the most frequent derangement, and is often the source of incalculable mischief in skin cases. But even this may not be easily discernible, for many patients are ignorant of what should be the normal action of the bowels, or are too careless or unobservant to report correctly at first in regard to this function; the affirmative answer so often given to the routine question "Do the bowels act regularly?" will not infrequently be found to be a long way from the actual truth, medically; that is, if it is desired to determine thereby whether the bowels are performing their excretory function in a perfect manner. Far too little attention has commonly been paid to the character and quantity of this excretion, and it is well recognized that there may even be a daily discharge from the bowels while the most extreme state of constipation exists, with vast amounts of concretions past which fecal matter may find exit. Time and space forbid entering more fully into this portion of the subject, which, however, is of the utmost importance in connection with many cases of skin disease.

Liver disturbance plays an important part in many skin disorders, as it does in those of other portions of the system, and should always be considered and treated in this connection. The great value of small and repeated doses of calomel and of nitric acid in many conditions of the skin needs only to be seen to appreciate this point.

2. Renal system.—Next to the exhalation from the lungs, that of the kidneys is the most important of all the excretions, as far as relates to the life of the patient. Its total suspension for a day is fraught with great danger, for a much longer period it is death. Its derangement is both a cause and a sign of disease. At the present writing no account is taken of organic disease of the kidney, for practically this is not very often found among skin patients. But functional disorder of the urinary secretion is a most common occurrence among those presenting diseases of the skin, and will often prove to be a very important element in their treatment; careful investigation of this function should never be neglected in skin cases of any importance.

It is not possible to enter here largely into the consideration of all the changes which may be found, and their significance in different cases, for many pages would not suffice to cover the subject, and a few hints must suffice.

Not only may transient albuminuria and glycosuria be of importance, and the grosser appearance of the urates, uric acid and the oxalates and phosphates have their significance, but the bile salts and pigments and indican may point to disorders requiring correction, while the percentage of urea is always an item worthy of consideration. This latter constituent of the urine, urea, suggests what is perhaps the most important element to consider in this connection, namely, the total quantity of the kidney secretion in the twenty-four hours, not only as relates to the watery element, but mainly as to the total solids, or excrementitious products which are thus eliminated, for it has been shown that urea bears only a certain relation to the other solids and to the toxicity of the urine.[1]

While the acidity and specific gravity of separate specimens of urine are often of some value in the guidance of the case, the true indications of the workings of the kidneys can only be obtained from a

[1] Transactions of the Medical Society of the State of New York, 1897.

knowledge of the total amount excreted in the entire day and the estimate thereupon of the solid excreta. When thus tested it will be found that many patients presenting obstinate affections of the skin suffer from an insufficient kidney excretion, either as to its watery or solid constituents, or both, the relief of which will prove of the utmost advantage in managing the eruption on the surface. The researches of Haig and others have shown also, I think, conclusively that the relations of uric acid to the system are of the greatest importance, and have much to do with the production of disease in the skin, as well as in other organs; although few will entirely agree with all that author has claimed in this direction.

3. *Cutaneous system.*—The importance of the skin as an emunctory organ and as a regulator of the heat of the body should never be forgotten, and its general condition should always be inquired into and appreciated in connection with skin cases. It is well known that many general diseases have their origin in a chilling of the surface, or check of perspiration, and the relations between the excretion from the skin and that of the kidneys is well recognized.

Therefore the general condition of the skin, its harshness or dryness, the tendency or not to active perspiration with heat or exercise, are all elements which have much to do with the general health, as well as with special eruptions on the skin. It is not at all uncommon for skin patients to present some of these departures from health in the general expanse of the skin.

With these may be mentioned the general appearance as to sallowness or vascular derangement of the skin. The condition of the subcutaneous and adipose tissues is also important, with which may be mentioned the weight of the patient, whether there has been loss or gain, etc. It may thus be remarked incidentally that the weight of the patient is an element to be taken into consideration in connection with the dosage of internal remedies, even as age is to be considered in the therapeutics of childhood.

4. *Nervous system.*—Many observations of most careful clinicians have demonstrated beyond question the intimate connection between many affections of the skin and the nervous system, and even in many eruptions which are not distinctly recognized as "neurotic" great benefit may result from a proper attention to this feature of the case.

Sleep is one of the most important elements to consider in connection with many diseases of the skin, for without proper and refreshing sleep it will often be impossible to effect much permanent benefit. As the writer has recently discussed this subject at length[2] it will not be necessary to enter upon it very fully on the present occasion. Suffice to say, that while in certain instances the disturbance of sleep, as by itching or pain, will be a marked feature calling for relief; in a far larger number of instances the faulty character of the sleep will only be learned after some patient investigation. Very often it will be found to be dependent upon errors of assimilation and occasionally upon circulatory disturbance; sometimes it is purely psychic, and it may be that even external causes can be found, which, by preventing full and refreshing sleep, have contributed largely to the continuance of the eruption. A case has recently occurred to me where the prolonged illness of a child so disturbed the father's sleep that this formed an important element in the continuance of a neurotic eczema on the backs of the hands.

Headaches are a very common symptom in those coming for the treatment of skin affections, being often closely related to the disease itself, and should always receive solicitous attention from the physician.

Neurasthenia, or a general nervous debility, is also very frequently met with in these subjects, and must be overcome, as far as possible, in order to obtain satisfactory results in many cases. There are many points in this connection which could be easily and profitably enlarged upon, but time and space forbid. In approaching a rebellious skin affection, however, due consideration should always be given to the condition of the nervous system.

5. *Circulatory system.*—While this may seem of less importance than some of the other portions of the subject, its bearing in certain cases is often very marked. Digitalis and aconite, as representing the therapeutics of two very opposite conditions of the circulatory system, may often, with other kindred drugs, play a very important part in the treatment of some skin affections. Palpitation and flushing of the head and extremities, as well as cold and clammy hands and feet, are constantly met with in connection with many diseases of the skin, and must receive attention, either as indications of other disorders or on their own account. Purpura is an affection where blood vessel disease is strikingly exhibited.

The indications afforded by the pulse are most important in many patients affected with disease of the skin, and the time-honored practice of judging of the patient's general condition by the character of the pulse should never be neglected in this class of cases.

6. *Respiratory system.*—While relatively little is known as to the variations in the performance of the work done by the lungs, or their effect on the general system or special diseases, there are often features relating to the respiratory system which may be of much importance in connection with some skin cases. The most notable illustration is the occurrence of tuberculosis, in the patient or family, in connection with which we find lupus, tuberculosis cutis, and forms of scrofulous eczema, etc.

But certain other conditions of the respiratory tract are also not infrequently found to be associated with or even related to diseases of the skin; such are asthma, hay fever, bronchitis, catarrh, etc., and in certain instances their existence and continuance may have a very important bearing on the case. The occasional alternations of asthma or bronchitis with attacks of eczema and psoriasis is sometimes very striking.

Chronic catarrhal conditions of the upper air passages may be observed in a very considerable share of patients with eczema and acne, and the continuance of this causing (as well as indicating) disturbance of the digestive tract will aid in making the case rebellious. In this connection may be mentioned the breath, which by its varied and often offensive odor may indicate various deranged conditions both of the upper respiratory passages and of the alimentary canal.

7. *Sexual system.*—The common observation of the development of acne at the period of puberty in both sexes, as well as the increase of the eruption at each menstrual epoch in females, especially in those exhibiting any disorders of this function, call attention to the fact of the relation between the skin and

[2] The Medical Record, New York, Nov. 20, 1895.

the sexual system. Instances are also multiplying in literature where other eruptions have been found to be distinctly dependent upon such relationship, and the present writer is constantly meeting these in practice. Perhaps the most striking example of all is found in what is known as "herpes gestationis," where, with each recurring pregnancy an acute, intensely irritating papulo-vesicular eruption appears, vanishing abruptly after the uterus is emptied of its contents.

The condition of the menstruation is, therefore, a very important one to consider in connection with many diseases of the skin, and the various disorders of it will often be found to improve greatly with the carrying out of wholly proper treatment for the latter.

Not only should the character of the menses be known and appreciated, but often physical or other changes in the female generative organs may have their influences in diseases of the skin, and should be rectified. Leucorrhea is also always of great importance, both as a sign and cause of weakness, and its existence should always be known and the trouble remedied. Also in certain females there may be an amount of pruritus vulvæ, perhaps dependent upon the leucorrhea, which may so depress the patient and prevent sleep to such an extent, as to prove a hindrance to the cure of the skin affection.

The occurrence of acne at puberty in the male, as already mentioned, shows that the sexual organs in this sex also have some, though less, influence on the skin. But the connection between stricture of the urethra and herpes genitalis and pruritus ani is also well recognized; and undoubtedly masturbation can cause rebellious acne. Sexual excess can likewise influence unfavorably many eruptions.

8. There remain yet several more general matters requiring consideration in patients with diseases of the skin. These are: 1, *anemia;* 2, *gout and rheumatism;* 3, *syphilis,* and 4, *malaria.*

1. *Anemia* is a fertile cause of many skin complaints, as it is constantly observed that many eruptions return whenever this state recurs; it should, therefore, always be recognized and treated when present. It is, of course, not infrequently associated with, or dependent upon derangements of some of the systems of the body which have been already considered, but very often it is due largely to erroneous diet and hygiene; the latter should always be very closely looked into and cared for in patients with diseases of the skin.

2. *Gout and rheumatism.*—These, as well as certain diseases of the skin, are often only the expression or result of some of the systemic disturbances which have been already considered; but as they may be such definite and commonly well-marked conditions, and represent such a well-recognized train of systemic changes, it is well always to know whether they have been present in the patient or his ancestors. Much has been written in regard to the part played by uric acid in many diseases, and it is certain that the recognition of the lithemic state, or *uricacidemia,* is of very great importance in connection with certain diseases of the skin. Whether we are to look upon the uric acid itself as the real cause of any of these troubles is still somewhat of an open question; certain it is, however, that it forms one link in the chain, or one easily demonstrable sign of the faulty metabolic process which may result in gout and rheumatism. Hence these diseases are important to recognize and treat in connection with many diseases of the skin. The beneficial results from the internal administration of salicylate of soda in some of them points strongly to a connection of this nature.

3. *Syphilis.*—This great poison has reached out until it has influenced countless lives, and today is represented by nearly 10 per cent. of all cases which come to public skin clinics, or appear in private dermatologic practice. It should, therefore, always be considered in all its possible bearings on this class of cases; although, fortunately by practice its features can generally be recognized without much mental effort and without much interrogation of the patient. But, on the other hand, caution is necessary not to suspect this cause too strongly in skin cases, for, as remarked, less than one-tenth of all cases are of this nature. When present, and properly treated, the results in this class of patients is most satisfactory whereas, if unrecognized, but little benefit can result from local or wrong internal treatment.

4. *Malaria* is regarded by some as productive of many skin diseases, and certain cases of urticaria are unquestionably of this nature, and cured only by quinin in efficient doses. It is certain also that by its depressing effect and by the liver and other disturbances which it may cause, it can act prejudicially in many diseases of the skin. It should always be looked for and treated when present.

There is very much more which could be said with advantage, both in connection with the points already considered and with many other items pertaining to the general medical relations of diseases of the skin. But already this paper has probably far exceeded what many would have expected from the subject. Enough has been said, however, to show that dermatology is an important study, not only because of the great interest which the varied conditions of the skin may present, but also on account of the very many vital relations which they may bear to other disorders of the economy.

It is quite probable that much that has been said is entirely familiar to many present, but, unless I am much mistaken, these principles are not universally put in practice in connection with the ordinary treatment of diseases of the skin. As remarked at the opening, local therapeusis has been so much advocated and arsenic is so universally believed to be "good for diseases of the skin," that the former are too often pushed to an unreasonable extent and the latter is too wholly relied on. In many, many instances, as my notes of cases abundantly show, Fowler's solution has been the only internal remedy which had been previously prescribed, even when proper investigation showed the most palpable departures from health, which were of the greatest causative importance to the eruption.

To be a good specialist in dermatology, or in any other specialty, one must be a good general practitioner. The specialist who confines his study and thought only and exclusively to his own branch, and can not or does not embrace the entire field of general medicine, can never succeed in the highest degree, and certainly can not serve his patients in the best manner possible.

I beg to assure my hearers that all this has not been written in any captious spirit, nor from any theoretical standpoint. All that has been said comes from the practical experience of over a quarter of a century

contact with just such conditions as have been mentioned, and all is written from a profound feeling and belief that only by proper attention to the matters here indicated can the most good be done to those coming under our care with many of the diseases of the skin.

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DIABETIC COMA AND THE TREATMENT OF DIABETES MELLITUS.

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The disease diabetes mellitus has long furnished the science of medicine with some of its most difficult and obscure problems, one of the most interesting of which is that symptom-complex called diabetic coma, which in many instances brings this affection to a fatal termination. It was at first believed that this condition was induced by an effusion of serum into the arachnoid but later investigations failed to confirm this theory. The idea was then advanced that the phenomena of diabetic coma were due to the action of some toxic body on the organism and a large number of substances have from time to time been considered as the essential factors in the production of this condition. Urea was long believed to play an important part in this as in other affections characterized by marked nervous and cerebral symptoms. Repeated experiments have shown, however, that if free diuresis is maintained, as is the case in diabetes, it is almost impossible to produce any untoward symptoms by the injection or ingestion of this body. It has been repeatedly shown that urea, under such conditions, is no more toxic than common salt. Frerichs then advanced the theory, on observing the presence of large quantities of ammonia in the urine previous to or during the occurrence of coma, that coma was produced by a so-called ammonemia, the ammonia being produced from the urea by an abnormal ferment by which it is broken up in the production of ammonium carbonate. Experiments on animals, however, showed that enormous quantities of alkalies could be tolerated by the system without the production of any severe symptoms, although it was possible to produce convulsions by the continued injection of large amounts of alkalies. About the same time Petters (*Prager Vierteljahrsschrift*, 1857, III, S. 81) noticed the occurrence of acetone in the urine of certain cases of diabetes and believed that this body was the cause of the peculiar odor of the breath and urine in certain cases of this affection. Acetone, however, is by no means present in a large proportion of cases of diabetic coma and is symptomatic rather of the early stages of diabetes. It was soon shown by Kussmaul that doses of from 4 to 6 grams continuously administered had no harmful effects whatever. Experiments by the writer showed that single doses reaching as high as 36 gm. had but slightly stimulant and intoxicant effect upon the system.

Gerhardt (*Wiener Medicin. Presse*, 1868, No. 28) then discovered a reaction which he believed to be due to the presence of ethyl, aceto-acetate, a body which was soon shown to possess no toxic properties whatever. It was then advanced that ethyl aceto-acetate was toxic from the free acetone which it yielded in its decomposition, but the harmlessness of the latter body in the system was soon after demonstrated, while later proof that ethyl aceto-acetate did not exist in diabetic urine showed the entire falsity of this theory. Diacetic acid, the body which gives the well known reaction with ferric chlorid in the urine of these cases, was soon after discovered by Tollens and more completely investigated by Jaksch ("Ueber Acetonurie und Diaceturie," Berlin, 1885), who in almost every case of diabetic coma was able to demonstrate its presence in the urine. He believed that it was formed in the intestine by the union of acetone and formic acid and attributed to it the production of diabetic coma, in what way he was unable to state. Experiments on animals and men, however, made by Frerichs and Kussmaul (*Deutsch. Arch. für klin. Med.*, 1874, S. 11) have shown that 10 to 20 gm. of this acid could be given in health without the production of any grave toxic symptoms and that it therefore possesses no poisonous properties in itself. It is interesting to note that after the administration of such large doses of this acid none whatever appeared in the urine although considerable amounts of acetone were present, thus showing that in the healthy organism a higher oxidation of this acid takes place.

"About this time investigations made by Coranda and Halleworden proved that the ammonia in the system fulfills two functions: 1, to contribute to the formation of urea, and 2, to neutralize all acids introduced into the system or produced there in the metabolism of the organism. It was also demonstrated by them that the ammonia excretion furnished an exact estimation of the acid out-put. On extending these researches to various morbid processes it was found that in certain fevers, etc., there was a great increase in the ammonia excretion, the patients becoming carnivorous by feeding upon the albumins of their own systems. In diabetes especially very large ammonia excretions were noticed, showing that in such cases there was a great excess of acid produced in the system which was neutralized by the available ammonia of the organism. At this point Stadelman, Minkowski and Külz discovered in the urine of diabetics with a arge ammonia excretion an acid heretofore unknown, which was found to be identical with beta-oxybutyric acid. It was noticed that patients with a large ammonia excretion were especially liable to die of coma and this suggested to Stadelman his theory that diabetic coma is an auto-intoxication, produced by an excess of acids within the body. So he at once began a series of experiments upon the introduction of acids into the circulation, using only those which could be potent through their affinity to alkalies and which in themselves possessed no toxic properties. The moment such an acid enters the circulation it attacks the first alkali available. In the case of man and the carnivora this will be the ammonia, in combination with which it becomes inert and is thus carried out of the system. Herbivorous animals, however, have no such ammonia production and the acid must at once attack the sodium and potassium of the blood and tissues. By such injections it has been found that symptoms identically resembling those of diabetic coma can thus be produced in those animals and that a prompt neutralization of this acid by a further injection of alkalies will at once restore consciousness. It has been therefore believed that after the production of the acid bodies in diabetes for a certain time they are neutralized by the available ammonia. At last, however, there comes a time when the production of ammonia can not keep pace with

the acid production, the fixed alkalies are attacked and diabetic coma due to acid toxemia is the result" (Graves, in *Proc. of Conn. Med. Soc.*, 1889).

This theory of the origin of diabetic coma is undoubtedly in the main correct, but diacetic acid as well as oxybutyric acid is to be regarded as a co-agent in the production of coma. In a specimen of diabetic urine examined by the writer 76 gm. of diacetic acid was found by the method given in a previous paper. This amount of acid was excreted during a period of only six hours and it is readily seen that the twenty-four hours excretion might easily reach 125–150 gm. When it is remembered that this quantity of acid is equal in acidity to about 70 gm. of concentrated sulphuric acid it is understood what an enormous amount of ammonia would be necessary to render it inert. As was stated in a former paper, over 16 gm. of ammonia was present in the six hour sample of urine which showed this remarkable acidity and it is evident that the production of such extraordinary quantities of ammonia could not be long maintained. The patient passing this sample of urine died from pneumonia about 48 hours afterward. In regard to cerebral symptoms, it was often noticed in the case mentioned that they varied directly with the intensity of the ferric chlorid reaction; that they appeared synchronously with the appearance of this reaction and almost disappeared upon the ferric chlorid test becoming greatly diminished while under a mixed diet. The cessation of the intense cerebral symptoms, on allowing carbohydrates in moderation and accompanying the decrease in the excretion of diabetic acid, was most marked. From a condition bordering on coma the patient within a few hours regained the use of faculties entirely, while his headache, vertigo, neuralgia, etc., either disappeared or greatly improved.

While it is believed by the writer that the theory that diabetic coma is due to an acid intoxication is correct, there are various bodies and processes which must also receive consideration. The great tissue oxidation in diabetes is closely allied to, and resembles, the katabolic changes in certain high and exhausting fevers. In fact, from their close resemblance in this respect, diabetes is essentially a fever without temperature. The urines of such affections, besides containing acetone and diacetic acid in quantities which in general are not sufficiently great to induce coma, contain various alkaloids which have been shown to possess exceedingly toxic properties. In diabetes, the leucomain creatinin has been found to be greatly increased in amount and it is believed that an excessive production of toxic alkaloidal bodies may contribute to the production of diabetic coma. The shock to an already depressed nervous system, caused by an excessive metabolism and the presence in the blood of large amounts of effete material must also be taken into account. Coma diabeticum, therefore, should be regarded as directly caused by a toxemia resulting from an abnormally excessive decomposition of albumin, both systemic and ingested, and its occurrence should therefore be retarded or prevented by limiting such albumin decomposition as far as possible.

In the treatment of simple glycosuria all exciting and predisposing causes should be discovered and removed. All nervous excitement should be carefully avoided and a tonic treatment combined with plenty of sleep, moderate exercise and hygienic living, should be instituted. There need be no exclusion of carbohydrates from the diet under any circumstances.

The treatment of diabetes mellitus, it can not be too strongly insisted, should not be directed toward the elimination of the sugar present in the urine, but rather toward the abnormal metabolic changes by which this sugar is produced. As should be most evident, the mere presence of glucose in the urine does not constitute the disease but rather the morbid conditions under which the excessive production and consequent presence in the blood of this abnormal quantity of sugar is rendered possible. What the writer believes these conditions to be has been detailed in a previous article. The severity of a diabetes is not therefore to be estimated according to the quantity of glucose excreted but rather by the rapidity of metabolism, digestive disorders, abnormal and toxic constituents of the urine and finally, of the greatest clinical importance, the cerebral and nervous symptoms. It must be remembered that the sugar excreted is only a symptom of the tissue katabolism going on within the organism, provided the patient is ingesting considerable quantities of carbohydrates. If on a proteid diet, he may still be diabetic and yet for a time excrete no sugar, it being produced from albumin within the capacity of the system to completely oxidize it. If ingesting carbohydrates and excreting no sugar the patient can not be diabetic. It has been shown in a former paper that the asthenic and toxemic condition of the diabetic is due to an excessive metabolism, partly induced in the natural course of the disease and furthered by artificial conditions of diet. Such being the case the treatment of diabetes will have one great indication—to retard and prevent as far as possible any excessive oxidation of albumins, either ingested or systemic.

In regard to diet, as has been shown, a strictly proteid diet, instead of removing, may even increase the dyscrasia of a true diabetes, nor, in advanced cases, will it be efficacious in its only object, the disappearance of sugar from the urine. As the effects of a rigid proteid diet have been detailed in a previous paper, it will only be necessary in this connection to state that a purely proteid diet should under no circumstances be employed. Foods of all varieties, provided they be nutritious and wholesome, should be allowed, although of course no excesses in eating should be permitted. Moderate amounts of carbohydrates in the form of bread, oatmeal, or rice should be by all means encouraged. Alcohol in moderation should be given, both on account of its stimulant and supporting properties as well as its well known power of retarding tissue metabolism. Moderate exercise should be directed and cheerful society insisted on to prevent the patient, as far as possible, from falling into that condition of melancholia and nervous depression which so frequently accompanies this affection. Sleep should be induced, if necessary, by hypnotics. The bowels should be kept open by laxatives or enemata, and any treatment having the slightest tendency toward depressing the system should be most carefully avoided. As for medication, since diabetes is essentially an affection due to an exhausted and depressed nervous system, tonic doses of phosphorus would be indicated. Strychnin from its well-known action of promoting metabolism, should be avoided. All drugs which have been shown to retard metabolism are indicated. Among these are antipyrin, codeia and arsenic. An advanced case of diabetes, however, should in our present knowledge be looked on as an incurable affection and the attention given to conserving the strength

and resources of the patient, delaying tissue waste and as far as possible lessening the liability to coma.

With regard to diabetic coma the writer does not hesitate to state his belief that an exclusive meat diet is in many cases entirely responsible for the occurrence of coma and that in a large majority of cases a fatal ending by coma is hastened by artificial and abnormal dietetic conditions. The treatment of coma, therefore, should be prophylactic and identical with that directed toward a retardation of albumin decomposition, since it only occurs through the action of the toxic by-products resulting from an excessive metabolism. Should, however, the coma be threatening or actually induced it has been recommended by Stadelman and Kirstein (*Wochenschrift für prak. Med.*, 1889) to employ at once large intravenous injections of alkalin solution, say 30 gm. of sodium carbonate in one liter of distilled water. This treatment has two objects, first, to neutralize any free acid which may be present and, secondly, to keep the blood in a normal condition of fluidity and dilute, so to speak, any toxic agents present. This injection should be slowly continued as long as the pulse of the patient shows toleration or until the urine excreted becomes alkalin. If necessary it should be repeated. This treatment should be employed as early in the coma as possible, since the chances of success decrease progressively with the length of time during which the coma has existed and consequently the length of time in which the oxy-acids and other toxic bodies have acted. This treatment of coma has been tried in a number of cases with only a small proportion of permanent recoveries but with general improvement and returning consciousness in nearly all these cases, the consciousness in many instances continuing for as much as 48 hours. These patients, after regaining the entire control of their faculties, again relapsed into coma and so died. This was explained by Minkowski (*Deutsch. med. Woch.*, Nov. 1889) on the ground that an almost irreparable damage had been done to the nervous centers upon the induction of coma. He advocates this treatment in all cases in which there are severe cerebral symptoms.

Intercurrent affections should be considered without reference, in most cases, to the existing diabetes and should be treated according to the complications and indications which may arise. Diabetes brings in its wake no secondary affections except such as may be induced in any exhausted and non-resistant organism.

SURGERY ONE HUNDRED YEARS AGO.

AN HISTORICAL STUDY

BY DR. GEORGE FISCHER.

DEDICATED TO THE GERMAN SURGICAL ASSOCIATION.

TRANSLATED FOR THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION BY CARL H. VON KLEIN, A.M., M.D.

VII.—THE RISE OF GERMAN SURGERY UNDER AUGUST GOTTLIEB RICHTER.

(*Continued from page 1025.*)

Göttingen at this time was full of animation. Heine was summoned from Saxony to follow out Winkelmann's ideas regarding ancient literature. By studying the same he wished to cultivate the heart and the mind and awaken a taste for all that is beautiful and good. As one of the first men, Germany owed him a renewal of the liberary studies and a coterie at Göttingen, who upon German education exercised an immense influence. Moreover, there were the bright sparks of humor scattered by the highly talented Litchenberg, who, of Richter's age, was a professor since 1770. There was also the Göttingen alliance formed about this time (1772), who lay a certain amount of claim to the resurrection of the national literature. That Richter showed an interest in the poetical effusions of Voss, the two Stollbergs, Bürger and others, and that he was a friend of the poets, like his colleague, Kästner, the mathematician, nothing is said. Nor that he was also a friend of the king's sons and of the Dukes of Cumberland, Cambridge and Sussex, who studied in Göttingen from 1786 to 1791. Soon a great literary activity was displayed among the entire medical faculty of Göttingen. Besides Vogel and Richter, Murray, Baldinger and Blumenbach began the publication of their journals for specialists.

Gradually Richter's lectures covered more ground, also that of medicine, and during the years of 1770–1790, when he had obtained his prime of life, his courses were on the following topics: 1. Special therapeutics every day for half a year, that is, during the winter term on acute, during the summer term on chronic diseases, at first making use of Gaubius' theories. 2. Surgery, on which he lectured daily for half a year at the hospital; in winter on medical and in summer operative surgery, "so that he practically demonstrated the same." 3. Ophthalmology daily, sometimes privately, sometimes publicly. 4. Diseases of the bones, during the winter session twice every week, open to the public. 5. General therapeutics. 6. Semiology. 7. Dietetics, publicly. 8. On directions given daily in the hospital for clinical, practical exercises. Now and then, during the first few years of his courses he lectured on several chapters of physiology and guided examinations in surgery. When more advanced in age Richter continued principally his medical lectures and discontinued those on surgery, held for six months at a time, and only occasionally gave a lecture on ophthalmology; hence Arnemann delivered lectures on parts of surgery, of instruction in operations and instruments, of syphilis and of diseases of women and children; and Wardenburg lectured on instruction in bandaging and surgical medicines, pharmacology and on legal medicine. Himly taught special pathology, ophthalmology, also medical surgery. C. M. Langenbeck, anatomy, instruction in operating and bandaging, ophthalmology, on diseases of the bones and directed courses in operating on cadavers. This subdivision of the lecture courses, as well as the establishment of various clinics, lessened the professorial duties of Richter as he grew older. His success as general practitioner grew day by day; those who were given up by others came to him as a last resort. Patients from distant lands, and even princes sought his advice. He was especially noted for his gentleness of touch in operations.

In the summer of 1786 he undertook a trip to Switzerland and France. While in Paris he attended the meetings of the surgeons. He arrived in Vienna in the month of September, 1802, and was present at the sessions of the Joseph's Academy.

When Richter became a regular professor he married the very beautiful daughter of a ship-captain, Hoop, and lived very happily in the corner house on Juden- and Kupfergasse, with his dear Jettie, who was very fond of wearing a string of real pearls in her hair above her forehead. She was unedu-

cated, fighting a contiuual battle with foreign words; furthermore, she was penurious, although she entertained much and put on great style. She died in Göttingen in the summer of 1833. Three children were born to them: Augusta Louise in 1772, Christiana in 1775 and George August in 1778. The latter became professor of medicine in Berlin and Königsberg, where he died in 1832.[1]

The daughter, Augusta Louise, married, on Christmas, 1792, the Crown Prince of Saxony-Weimar's privy counselor, body physician and medical science professor of Jena, Justus Christian Loder.[2]

Of Richter's personality we know but little. His portrait,[3] which was taken in his 54th year, and which was presented to him by his pupils, shows a powerful face with marked features, having a pleasant, good-natured expression. His friendly countenance, as well as his agreeable and polished way of speaking greatly captivated his patients. Gœthe, who met him in Pyrmont in 1801 in the company of Prince Sanguszko, who was suffering with sore eyes, described him as, "Always being in the most amiable mood, full of dry humor, teasing and bantering, now ironical and paradoxical in his remarks, then again deep and sincere." The sunny side of his more advanced years is also shown in the following humorous letter:

GÖTTINGEN, Aug. 25, 1807.

My Dear Mr. Counselor Runde:—With pleasure I accept your invitation to assist in the coming operation of the "driving out" of his Satanic Majesty and the "driving in" of the Holy Ghost into your recently born daughter, and I will not be found wanting, in case his majesty should show a disposition to defend himself. For this operation you could not have chosen a better assistant, for you are aware of my religious spirit and know that I am somewhat experienced in operating. But I do not as yet know whither we will chase Satan, for he must have an abode somewhere, as we are not capable of depriving him of his existence. To send him, in the usual way, to the herd of swine, we do not dare, because they might become rabid and plunge into the water where they would drown and we would have to pay for them—unfortunately the times are too hard just now for such extravagance.

Yet you have a good sturdy baptizer. For in the end he must be excellent when called upon to bear the brunt. To say that I felt good about the matter I would have to lie about it. The girl is to be named Lenore, and I do not know how it is, but the name Lenore always makes me shudder a little. The Devil seems to especially approve of the Lenores.

For the rest I heartily congratulate you on the increase of your family and am delighted to hear that Hanchen is so well.

Here, we do not know ourselves how we are. Today Martens and Blumenbach go to Paris as representatives of the Academy to make their obeisance to the King of Westphalia. My wife sends her best regards. Your obedient servant,

A. G. RICHTER.

Richter was a trifle egotistical and was wont to estimate everything according to the advantage to be derived therefrom; being naturally rather self-conscious, he was gratified with his own art. Yet he never mentioned his achievements for German surgery, nor spoke of his brilliant cures, a very common practice among lesser lights. If the reader is not fond of anecdotes, he may pass over the following trivial occurrences: When Professor Hegewisch of Kiel, afterward counselor of the University there, attended Richter's lectures and told the same where he was from, his teacher answered that in passing through that region on his way to Sleswick (to attend to a cataract operation at the court of the Landgrave of Karl von Hessen) he found it to be a dreary and barren tract of country. Hegewisch replied that the rear of the Duke's estates was, indeed, only prairie, but along the coast the land was very fertile and the scenery of various portions grand. Thereupon Richter replied: "Like an old coat with laces." About the year 1780 the well-known physician, Olbers of Bremen, received a letter from him, "written in the usual rude style, concerning nothing but an intended cataract operation." There are eight specimen letters of but little importance in the Göttingen library; the following written by Richter when a young professor, was a complaint made to the rector of the University against Surgeon Tolle for his bungling cure and improper conduct, of which he himself had been accused:

GÖTTINGEN, Feb. 29, 1768.

Magnifice Academiæ Prorector:—Your excellency will kindly permit me to communicate a case which seems to demand your attention. Three weeks ago I was summoned by a woman whose name is Kayserin and who had the previous day fallen heavily on her left arm. She had immediately called in Surgeon Tolle, who, after having looked at the arm, told the patient that it was broken in three places, whereupon she was terribly frightened. Then he put a thick compress lengthwise on the inner side of the arm and a similar one on the outside, and around these tightly wound a bandage at least eight yards long. Soon after this dressing the pains increased, the arm stiffened and, especially the hand swelled so that it turned blue, and Mrs. Kayserin was compelled to send again for Surgeon Tolle the same evening to change the bandage and relieve her pains. But he did not come until she had sent for him two or three times, and then did nothing more than loosen the same a little. The following day the patient summoned me; found the arm in the condition mentioned above and the hand still very much swollen. After a careful examination I told her that the dressing was wrong and harmful, that the bone had not been fractured. This statement gave her courage and confidence and she requested me to undertake the cure, which I promised to do. Mr. Tolle did not visit her, but sent word that he ought to know best when the arm needed bandaging. On the third or fourth day the patient notified Surgeon Tolle that his services were no longer required. On hearing this Tolle hastened to her home and entered her room so boisterously, keeping up such a tirade and stamping with his feet for an hour that the poor woman, who is consumptive, trembled from head to foot with fright. Among other things he said she treated him like a boy. When she told him I had assured her that her arm was not broken he said: "If it were broken, could I not cure it as well as Professor Richter?" He had to be a professor, too, some day. A few of the bandages which I had loosened and thrown onto the table he snatched up and hurled them out of the window on the street. Yes; even those which the patient had around her arm, he wanted to tear off and throw them out. Seeing a prescription which I had written for her on the table he asked who wrote it. The patient replied, "Professor Richter." He took the recipe, put it into his pocket and said she should get his compounded. To say nothing of his improper language; that he behaved unmannerly the patient and other people in the house will bear witness to. The honorable body phsyician, Vogel, and his students, to who I presented my patient a few days ago, can testify that the arm was neither broken nor sprained. I believe that this case should have your excellency's attention, for not only did Surgeon Tolle frighten and deceive his patient with his incorrect statement of an existing fracture, but also

[1] George August was educated under his father's strict supervision for the medical profession and in the year 1800 received from him his doctor's degree. He was then sent on a journey for five years, his father's fame procuring the warmest welcome for him everywhere. Much of his time he spent in Vienna with P. Frank and in Paris with Dupuytren, who was then beginning his brilliant career. Returning home, he complied with his father's wishes and went to Prussia, passed the state examination in Berlin, where he settled as practical physician in 1805. A few years later when the university was established he received the appointment to deliver lectures on general and special therapeutics, etc. In 1813 he enlisted as military physician in the war against France, directed the hospitals at Torgau during the following year, and after the close of the war became regular professor in Berlin. Then he accepted a similar situation in Königsberg, in 1821, where he established a medical policlinic, which he conducted for eight years at his own expense, until he obtained a subsidy. He died of apoplexy. His quiet but persevering activity, his uninterrupted diligence, enabling him to publish a work of several volumes in a short time, deserve special mention. His daughter, Frau von Hannecken, lives in Berlin at the present time.

[2] It is said that this union with the widower was an unhappy one, for when Loder, who was rather extravagant, went to Russia, Augusta Louise's parents forbade her from going with him and protected her property by a deed of feoffment. Mrs. Loder never saw her husband again, and afterward lived with her mother in Göttingen. Her daughter Bertha married a Herr von Lützow in Schwerin; her son August died in 1818.

[3] Drawn by Schulz and engraved in copper by Lips. Other portraits of him are found on the frontispiece of his fifty-second volume of the "Allgemeine Teutsche Bibliothek" and of his "Manual for Physicians," which appeared in 1783, and one was done by Schwenterley in 1792.

increased the harm done to her arm by his unskilful bandaging. Furthermore, through his boisterous actions he caused the patient's condition to become very critical a few days afterward, when she suffered with fever, sleeplessness, sweats and other afflictions; so that I had considerable trouble to bring her about again. Besides, I believe I have good reasons to demand satisfaction from Surgeon Tolle on account of his disgraceful language and behavior toward me, and all the more, inasmuch as this is not the first time that I have caught Tolle with such improper conduct. I leave him to your judgment, your excellency, and remain your excellency's obedient servant,

AUGUST GOTTLIEB RICHTER.

Until he grew quite old Richter enjoyed sound health, with the exception of a few attacks of gout. During his activity at the hospital he became very sick with spotted fever by infection and attributed his recovery to purgatives alone. Podagra he declares to have had at least fifteen times *in optima forma* contracted by cold or fright, usually in the joint of his big toe; yet he did not consider himself gouty. Ever a poor pedestrian, his feet pained him after short tours. After a serious inflammation of the joint of the middle finger, the same always remained thick and stiff. The attacks of gout were often so painful that, when he traveled to Cassel to attend a patient, he had to be lifted out of the vehicle, but taking a few glassfuls of strong, old wine, he was able to walk with ease to his patient's home an hour and a half later.

His fame spreading more and more, his honors grew apace. Several times he was elected prorector; in 1770 he became an associate and in 1776 an active member of the Royal Society of Sciences. In 1780 he was appointed body physician and two years later from the Palace of St. James he received a patent from George III. as follows: "We certify and acknowledge that We, in behalf of the learnedness and other good qualities Our body physician and professor medicinæ of Our University Göttingen, August Gottlieb Richter, commended to Us, have shown him the grace of bestowing upon him the designation of Our Privy Councillor." He had the title of consulting physician of the king of Westphalia, which honor he shared with unimportant men and hence was no honor. Several of the learned men dictated their works to him; for instance, Privy Councillor Nicolai, the first volume of his "Theoretical and Practical Treatises"; Wardenburg dedicated a portion of his translation of the Desault bequests, published by Bichat, and in no friendlier and more sincere way could he have expressed his gratitude to his dearest teacher. Abroad, Richter was the best known German surgeon. Perusing the first pages of Samuel Cooper's "Dictionary" we can see how often his name appears in connection with various articles. This frequency was also caused by the translation of several of his works. From the years 1775, 1777 and 1792 on we find him recorded as a member of the Royal Swedish Academy and the medical societies in Copenhagen and Edinburgh. To show his gratitude he dedicated the first volume of his "Medical and Surgical Remarks." In 1806 he became a member of the Society of Medicine in Paris.

His prominent position brought him in contact with the best contemporaries. At Göttingen the most friendly relations existed between him and Blumenbach, living together almost forty years. The dedications of his works disclose to us with what men he was on intimate terms. They were: A. V. Haller, Acrel, Theden, C. C. Von Siebold, Voitus, Leber, Starke, Rougemont, Bilguer. Weidmann, Morenheim, Hartenkeil, Goerike, Brünninghausen, Plenk and Stoll. Although his life in general was very peaceful and flowed along without any great and shocking events to disturb it, he, too, had to learn that dogs bark at him who rides fast. But what man of talent has no enemies? We smile at him who follows in the path of science only at a distance; he who walks apace is looked at repugnantly and he who outstrips the others is despised. During the first years of his professorship Richter could not get along with Baldinger, who became regular professor of medicine in Göttingen in 1773 and was Richter's colleague for nine years. Also as a critic, he was not spared the petty literary attacks. These began with the first volume of the *SurgicalQuarterly* by Professor Henckel of Berlin, whom Richter took to task, saying that the first part of his treatise on "Surgical Operations" had been carelessly written and with too little consideration, regardless of arrangement and connection. The second part he found executed in the same manner as the first; then passed a similar judgment on the third, and of the fourth he simply said: "It is the same old story." These disparaging criticisms from the pen of a young surgeon, which were severe yet always genteel, the old gentleman, Henckel, did not wish to stand and defended himself with a sledge hammer:

"The learned Professor Richter, the only one who censured me! Gently, gently, Professor! I honor you as a learned man! also as a surgeon; but *quantum est quod nescimus*. How can a learned man write so ungentlemanly! You live at one of the most famous universities and are daily surrounded by the most learned and most famous men! What will these gentlemen think of your great babble? Were you not a member of the same and did I not deem it a disgrace to myself, I would pay you back in your own coin. My dear Professor, I honor you on account of your numerous achievements. Do away with such baseness and vengeance! They do not improve the sciences. Drop all nonsense of that kind. Had I insulted you in my writings, you might have quoted those parts and published my superficiality in science whereby you would have obtained the greatest satisfaction from the learned profession; but you should do it in a wise way, that is for irrefutable reasons in honor of the profession and for the good of science. *Hic Rhodus, hic salta.* But I was amazed to find that you dared write such remarks about me. Do you know who I am? (Pardon this question.) Do you know what once happened to that newspaper editor? But I will here leave the matter and assure you that you will not have cause to fear anything further from me regarding the above. (Treatise on Surgical Operations—Part 4, 1772.) "Your friend."

It is a noble trait of Richter's character, that a few years later, after Henckel's demise he wrote the following magnanimous laudation: "This is the last writing of a very active, skilful and learned practical surgeon, of an experienced man, well read and full of enthusiasm for his profession, who, regardless of the lack of a few literary talents, achieved much for German surgery and whose memory I cherish and recommend to my readers, unmindful of the few literary disagreements Henckel and I had."

Another opponent who would not endure Richter's criticism was Professor Alix of Erfurt, who insulted him in the most vulgar fashion. But the young Göttingen professor did not allow himself to be disturbed thereby. Later he once more became involved in a violent quarrel, which his enraged opponent carried on with intense coarseness. In 1793, when the fourteen year old Prince von Wied had dysentery and was treated by the court physician, Hartung, with opium, he nevertheless grew so much worse that the court physicians Brüning and Wendelstädt of Wetzlar, were consulted. Both greatly opposed to opium, could not agree with the family physician, and believed that the sleep which had set in was due to the 100 grains of opium administered by Hartung and calumniated him as a poisoner throughout the city. Hartung appealed to Richter, who had recommended the use of opium

in cases of dysentery in his "Medico-Surgical Remarks," only a little while before this occurrence. Hartung acquainted him with the facts and begged his advice. Richter approved of Hartung's course, whereupon the latter very indiscretely published his letter without his knowledge or consulting his wishes. This so enraged Wendelstädt that he wrote Richter a series of six letters, so immoral and so indecent that they were left unanswered. In 1794 Brüning published this filth in his work on the injuriousness of poppy juice in dysentery. He deserves that his name be blotted out entirely and it is sufficient for us to know that Richter came out victorious, having, as always, conducted the strife with great moderation. Unfortunately, this incident resulted in Richter, whose works had always been received with great enthusiasm, ceasing all publications henceforth. That he allowed himself to be discouraged and that he wrote no more, was weakness on his part, in spite of the great wrong done him; for he was only 51 years old.

His son admits that the bitter controversy, which his recommendation of opium, in cases of dysentery, had occasioned was the cause that the second volume of his "Medico-Surgical Remarks" did not follow the first directly. During the latter years of his life, the old gentleman loved peace; this is probably the reason that we have not heard of his interference in the frequent strifes among the students which took place at Göttingen during the period of 1790 to 1808. He disliked nothing more than literary strifes that afterward became personal onslaughts. Repeatedly his son begged him for the manuscript of the second volume until 1811, when his father finally yielded and sent him the same to Berlin accompanied by the following lines: "These matters were really intended for the second part of my 'Medico-Surgical Remarks;' however, I no longer have a desire to publish books and look upon my literary course as closed. Now-a-days if one wishes to please as an author, he must write in high-flown language; clearness and distinctness are no longer liked; but I can not do so and care not to learn it in my old age; thereby most physicians wear the spectacles of their theory on their noses, do not believe what they can not explain in their studies, but believe absolutely everything that belongs to their system; they are deaf to all carefully considered experiences. I therefore present you with this manuscript and permit you, in compliance with your wish to have the shorter treatises published in the 'Journal' of your friend, Professor Wolfart." When a year after the death of his father, the son faithfully published this part without any additions whatever, the book was universally considered invaluable throughout Germany. Richter became prematurely old. Had Richter been able to follow out the great ideas which threatened to overthrow all the old ones in England, then he would not have permitted his activity to be stayed by the younger, but unimportant surgeons, like Arnemann and Wardenburg, nor by the rising Langenbeck. Thus it was that in his more advanced age, he was more physician than surgeon.

Although over 70 years of age he was still very active and almost over anxious about the care of his health. Having suddenly taken ill with a severe attack of hepatitis expodagra retropulsa, he died within a few days, on the morning of July 23, 1812. For forty-six years he had been a professor at Göttingen. With the words "festively buried," found in the church registry of July 26, ended the story of his earthly career. Where his grave is, is uncertain. Just so much recollection remains of it as Hamlet's grave-digger had of Yorick, the king's jester, whose skull he recognized after twenty-three years, and the two grave-diggers at Göttingen would at least know whether the monument with the inscription, "Privy Councillor Richter," placed in the Albini Cemetery a few years ago, marked the true resting place, or whether the burial in the family vault in the St. Johannis Cemetery was really that of Richter's body. On August 22, for the departed one, Professor Mitscherlich, in the name of the Akademie, held memorial services, which he accompanied with Latin verses composed by himself (Piis manibus A. G. Richteri pia Acad. Georgia Augusta). A meeting was called for October 24 by the Society of Sciences expressly in memory of the deceased members, Heine and Richter; the latter's friend, Blumenbach delivered the memorial address.

Surgery in Germany owes its elevation and progress to Richter. Yet those who are anxious to see great discoveries by which the territory of science has been extended or guided into a new channel, seek in vain, for Richter's researches did but little to promote surgery. His achievements lie scattered throughout various fields and are, therefore, less sharply brought to light.

Richter was the first German to assimilate the ideas of French and English surgery and bring German surgery abreast with the times. In that respect he was an exception to the field surgeons' methods, which then still clung to the German surgeon and from which even C. C. von Siebold, Theden, Schmucker, Langenbeck and Brünninghausen could not be exempted. He rose far above these and became a model for Germany. He comprehended all that had been accomplished by the Parisian Académie de Chirurgie, but also much that had been suppressed in the bud. Richter knew of the great rise England owed to the founding of the Royal Society, to Wren, Newton and Stephen Hales; he was familiar with the best everywhere, with one exception. He did not appreciate John Hunter. This was a weakness of his. After Haller's astonishing works, he ought to have achieved more; outside of a scissors, he did not invent or discover much, but he combined and completed what others invented and discovered and transplanted it on German soil. This was his great work, of value only to Germany, but which earned for him a most honorable position. His sound and pointed judgment, his thorough but modest critique, combined with the spirit of truth and the freedom of science, were the means by which Richter exerted such vast influence over the scientific world of Germany. But before the shapeless, yet giant hand of a John Hunter, and even before the reforming spirit of a Desault, whom Richter himself acknowledged as the greatest of the then living surgeons, he had to withdraw.

Richter simplified operations.—While Heister had recommended a chaos of ill-shaped and useless instruments, Richter considered this outfit mere display, and thought it greater skill to perform the various operations with the scalpel alone. But he was ever ready to accept a new good instrument, and bade his colleagues and scholars to purchase for him anything truly useful which they might come across in their travels. He added nothing new of any consequence, for his were only modifications of other instruments. To these belong his angular bandage scissors, a pair

of nippers for polyps, an improved tracheotome, an amputating knife, a cystitome, a herniotome, an artery hook and others. How well German surgery was equipped with instruments, is shown by Tilly's "Catalogue," published in 1764 in Berlin, which contained 523 illustrations. Richter believed that at least 400 of them were useless and dispensable. Although the English instruments were considered the best, there were also a few German manufactures, for instance those of the mechanician Lütz of Würzburg, which were very fine. Most of the younger surgeons interested themselves almost exclusively for operative surgery, and thus greatly neglected the cure of many diseases by medicine. To be able to name all sorts of instruments, especially the most modern discovered by some one in France but scarcely known in Germany, to know every operative method, was all that was required for a young skilful surgeon of the times. Richter greatly opposed this tendency. When he informed Morand that the latter's rupture knife was pictured in various German text-books, he was astonished to find that this youthful invention of his was valued in Germany. Richter demanded a thorough knowledge of the origin, nature and course of a disease, matters about which few concerned themselves, without in the least underrating the operative ability of the surgeon. But he deemed it important, yes, even more so, to avoid operations and cure injuries without them if possible. How little knowledge was necessary for some operations, he said was proven by the wandering oculists, rupture surgeons and lithotomists, who seldom possessed more than their mechanical skill, knowing little of the anatomy of the case in hand, but nevertheless successfully performed some of the most serious operations. Every blockhead, he thought, could trepan and amputate, but to diagnose head injuries, heal complicated fractures of the leg without an amputation, or to discover the causes of or relieve an ugly ulcer, could only be accomplished by the profound, deep-thinking surgeon. The proper application of surgical medicines requires by far more ingenuity and knowledge than the art of operating. Inasmuch as surgical pathology was being neglected in the largest hospitals, he feared a decline of true surgery, if this rushing blindly into an operation continued among the surgeons.

As an author Richter was unsurpassed; he wrote in a very choice literary style. This was a great thing at a time when all the physicians were discussing the point whether the Latin or their mother tongue be the most appropriate for scientific works. Did he study Lessing's works, the "Literary Letters," "Laokoön" and "Dramaturgie," which appeared shortly before the beginning of his literary career, read them and make this classic prose his prototype? No other German physician's style compares with Richter's.

(To be continued.)

SOCIETY PROCEEDINGS.

Illinois State Medical Society.

Abstract of the Proceedings of the Forty-seventh annual meeting, held at East St. Louis, May 18, 19 and 20, 1897.

FIRST DAY—MORNING SESSION.

The society met in the Music Hall, and was called to order at 10 o'clock by the President, Dr. A. C. CORR, of Carlinville.

Prayer was offered by the Rev. J. J. READER, of East St. Louis.

An Address of Welcome was delivered by the Hon. M. M. STEPHENS, Mayor of East St. Louis, which was responded to by President CORR.

After the reports of the Executive Committee, Committee of Arrangements, and Committee on Registration had been presented, the reading of papers were taken up.

SECTION ONE—FIRST SESSION.

Chairman, Dr. JAMES B. HERRICK, Chicago.
Secretary, Dr. J. O. DE COURCY, St. Libory.

Dr. R. B. PREBLE, of Chicago, read a paper entitled

ARTERIO-SCLEROSIS AS IT AFFECTS THE HEART,

and exhibited specimens. The vascular cardial changes may be conveniently classified in three groups; 1, those in which the coronaries are diseased; 2, those in which the valves of the heart are affected by the process; 3, those in which the heart is hypertrophied, but otherwise unchanged. In the first group we find the areas of anemic infarction of the myocardium due to thrombosis of the fine twigs of the coronaries. Death may result, but more often the infarcts are replaced by scar tissue giving rise to the chronic fibrous myocarditis. The scars may yield and an aneurysm of the heart result. These and other effects were illustrated by specimens furnished by Dr. Hektoen from the Rush Medical College Museum.

Clinically the cases of atheroma of the coronary arteries may be arranged in groups according to the systems most prominent in the course. In one group the angina pectoris with its radiating pains is the marked feature. It is necessary to distinguish the true angina from the pseudo angina seen in nervous cases, in intoxication especially with tobacco, and reflexly from diseases of the stomach, liver and other organs.

A second group are characterized by attacks of acute pulmonary congestion with dyspnea. A third group by suddenly or slowly developed signs of cardiac insufficiency. In still another group, rapid or slow or irregular heart's action, either constant or paroxysmal, is the marked feature.

There is no sharp line of separation between these various groups, for they merge into each other, and usually almost every case will show something of each group of symptoms.

Brief reference was then made to some points of difference between the valvular lesions due to arterio sclerosis of the valves and those due to endocarditis.

Dr. FRANK P. NORBURY of Jacksonville, followed with a paper on

ANTERIO-SCLEROSIS AS IT AFFECTS THE BRAIN AND SPINAL CORD.

The author said that arterio-sclerosis was by no means a rare disease, but it had only been within recent years that it had received the clinical attention it deserved. Thayer of the Johns Hopkins Hospital had informed us that it was seldom that an individual over 40 or 45 years of age was free from some evidence of the existence of this disease; also, that in the negro race it was a more common disorder than in the white.

The etiology of arterio sclerosis was not always clear, but we know that it may originate from the natural widespread fibrosis and degeneration or old age, from alcoholism, syphilis, tuberculosis, gout, rheumatism and diabetes, and further that inherited arterial degeneration may be a factor. Also purely local conditions may cause it, such as undue strain upon the vessels or from constant mental worry and anxiety, and even neurasthenic states may engender it.

Little reports two cases of cerebral degeneration with calcareous formations, following anxiety and mental effort. The author believes that arterio-sclerosis is usually a fundamental condition in such cases.

He next dwelt upon the pathology of the disease and considered it at some length.

A characteristic case was reported as follows: Patient, a male, aged 60, was for a number of years an inebriate. No syphilis. About two years ago he first complained of headaches, later dizziness, and then his friends noticed lapses of memory. Important business engagements were forgotten and papers misplaced. Later ataxic aphasia (transitory) appeared; also a slight glossoplegia; next slight facial monoplegia, which still exists; then profound vertiginous attacks followed by syncope. Then mental confusion, then delusions of suspicion, and finally some violence. He was then admitted to an insane hospital where he believed he was imprisoned for an imagined crime that he had committed. He became very emotional, slept poorly and was very restless. The motorial agitation together with other psychical symptoms leads Dr. Norbury to believe that the lesion especially embraces the motor and frontal regions. So-called senile dementia is really chronic cerebral atrophy.

Dr. E. J. BROWN of Decatur read a paper on

ARTERIO-SCLEROSIS AS IT AFFECTS THE KIDNEY,

in which he said that most observers now agree that the kid-

ney changes accompanying a general arterio-sclerosis are secondary to the latter disease. Some, however, still hold to the theory that all sclerotic changes in the blood vessels are secondary to a primary fibrous change in the kidneys; that the latter organs share with the heart, the brain and the liver most serious pathologic changes in most cases of general arterio-sclerosis. Bright himself noticed that chronic renal disease is often associated with hypertrophy of the left ventricle, and all subsequent investigators have confirmed his observations. Grainger Stewart found cardiac hypertrophy in 46 per cent. of the cases of granular contracted kidney, Loomis in 60 per cent., Dickinson in 74 per cent. and Gallabin in 80 per cent. Strümpell is inclined to regard the effect of a general arterio-sclerosis upon the kidneys as much less important than the effect of that disease upon the heart and brain, and he mentions only the "granulated senile kidney" as being due largely to atheroma of the renal arteries. In fact, in speaking of the etiology of arterio-sclerosis he ranks chronic nephritis with alcohol, syphilis, rheumatism, gout and lead poisoning as causes of that disease. Whether the kidney lesion is primary or secondary, there is no doubt but that renal symptoms occur sooner or later in the majority of cases of general arterio-sclerosis. In nearly all of the cases coming to autopsy, according to Osler, there is seen a sclerosis, patchy or diffuse, a condition practically that of contracted kidney. It is seen in a typical manner in the senile form, and not infrequently develops early in life as a direct sequence of the diffuse variety. He further states that it is difficult to decide clinically whether the arterial or the renal disease has been primary. We may be suspicious of a renal disease in every case where we have the four signs of a general arterio-sclerosis which are regarded as pathognomonic, namely, increased arterial tension, palpable thickening of the arteries, hypertrophy of left ventricle and accentuated aortic sound.

With reference to the prognosis, it depends upon the age of the patient, the etiologic factors in the disease, and especially upon the stage of the process affecting the renal tissues.

He then reported two cases illustrating two forms of general arterio-sclerosis, in one of which there was a predominance of renal symptoms, and the other with prominent renal symptoms, but with a fatal termination due to circulatory changes.

Dr. HENRY B. FAVILL of Chicago contributed a paper on

TREATMENT OF ARTERIO-SCLEROSIS,

which was read by Dr. Preble in the absence of the author. All treatment must find its reason in the consideration of three general factors: 1. the cell and its natural endowment. 2, the character of the supply from which the tissue derives its support; 3, the controlling influence which determines its nutrition and functional activity.

The common factor in the various types appears to be defective food metabolism. The active agency inducing this defect varies. We find it in the over-fed and in the under-fed, in the inactive and in the over-active, in the young, middle-aged and old. In its earlier stages it is usually associated with good digestion, rarely with dyspepsia. It is a post-digestive development. The most constant factor in a series of cases is evidence of incomplete disposal of nitrogenized material. Chemically we determine this by the short excretion of urea. This means short manufacture of urea, or defective separation of urea, or both. Clinically we detect the condition in symptoms of nitrogenic intoxication, the so-called uric acid manifestations. It is by these that our attention is primarily attracted, and in the analysis of these that we are enabled to demonstrate early arterial change. That the true toxin is uric acid is doubtful; that the toxic agents generated in this way are several is highly probable. These facts are not asserted as ultimate. Unless lightly held as provisional data, they are likely to mislead. They do, however, furnish the clinical characteristics, more or less demonstrable, which serve as a basis for the conclusion that the essential agent in this process is toxic, and for the most part auto-toxic.

The treatment of this stage of the disease is essentially hygienic. The initial proposition is, how to adapt the individual to his environment. In general the elements of food and physical expenditure are at fault. The food should be adequately introduced and thoroughly eliminated when no longer useful. Decided failure in either direction is destructive. For any given individual, "is his food adapted to his work?" should be asked. To meet this query, what do you demand? That his eliminating organs yield the proper representation of his ingesta. Clinically we have well recognized evidences of toxemia by which to measure the condition. Believing that the toxic agents are nitrogenous, we have approximate means in the estimation of urea and total nitrogens excreted in the urine. Marked departure of these from the standard average of health demands explanation and correction. Given a good digestion, a mixed diet may be right or wrong according to its amount. Clinically we encounter, as a rule, the necessity to diminish the nitrogenous food, or to change the form of its use. That the struggle against this gradual toxemia is better accomplished by attention to this line of procedure, the speaker had not the least doubt. Practically it amounts to the gradual adoption of a mixed milk and vegetable diet, and experience fully warrants the advocacy thereof.

THE INDIRECT TREATMENT OF DISEASED HEARTS.

This was the title of a paper by Dr. ROBERT H. BABCOCK of Chicago, in which he reported the following instructive case: During the past winter a lady of 50 was placed under his charge with a history of having been treated for years for a weak heart. Upon one occasion last fall, while shopping, she had succumbed to an attack thought to be heart failure, dyspnea, cyanosis, etc. His examination revealed a slight enlargement of the heart transversely with rather feeble sounds, but no murmur. The pulse was regular, slightly accelerated and moderately tense. The patient was somewhat corpulent and the abdomen was flabby and pendulous. She gave no symptoms of abdominal or pelvic disorder. Urinalysis was negative; blood examination showed a mild chlorosis, hemoglobin 72 per cent. After careful consideration of the history, symptoms and result of examination, Dr. Babcock decided that this was a case in which the heart required no direct treatment, but that efforts should be directed to improving the general health and lessening the work put upon the heart. Consequently he sent her to a rest cure where she was given forced feeding, massage and rest in bed. After two weeks her pulse became intermittent and she complained of vague precordial discomfort. Examination of the heart disclosed no cause for the condition, but there was infra mammary tenderness in the areas shown by Head to indicate gastric disturbance, and analysis of the urine showed uric acid crystals in abundance. The colon was flushed two or three times, the patient ordered to drink large quantities of water, and a few drops of tincture of digitalis twice or thrice a day were given in the hope of regulating the pulse. This failed, however, and was discontinued after a few days. With this exception the patient received no heart tonics. After three weeks of treatment, examination of the blood showed an improvement in the hemoglobin of only 3 per cent., and treatment was continued for two weeks longer. At this time her pulse was still somewhat irregular, but she felt well. Although no symptoms of pelvic disease had ever been acknowledged further than great weariness upon walking, exploration of the pelvic viscera was considered advisable in the expectation of its throwing some light on the patient's condition. Accordingly, a gynecologist reported perineal and cervical laceration with subinvolution of the uterus, and advised a reparative operation. This was done without delay, and since her convalescence from the operation the patient's condition has been highly satisfactory so far as the heart is concerned. Without any further treatment, she is now able to ascend stairs and enjoy long walks without dyspnea or other discomfort.

Here was a patient who, without very positive evidences of cardiac disease, suffered from symptoms of weak heart, and for years had supposed that was her only complaint. Yet without therapeutic measures directed to this organ, except physical rest and the small amount of digitalis previously stated, the pulse lost its irregularity and the heart its potential weakness so soon as relieved from the reflex disturbance proceeding from the pelvis. Without wishing to ignore the influence of rest in this case, the author yet believes the reinstatement of cardiac vigor must be attributed in large measure, if not wholly, to the surgical interference.

Finally, when a diseased heart which has hitherto performed its work satisfactorily, suddenly displays vagaries of action, it should not be taken unreservedly for a sign of failing compensation. Efforts should be made to discover the cause, since the correction of injurious habits, or the removal of reflex disturbances, may set the heart to rights before serious damage ensues. Should the derangement of the cardiac action threaten to produce or actually cause dilatation, then digitalis and strychnia are indicated, but so long as compensation is intact, digitalis and allied remedies should be withheld.

DISCUSSION.

Dr. D. R. BROWER of Chicago said arterio sclerosis was a very common affection, and, speaking from personal experience, it was a condition very frequently overlooked, it being the foundation of many nervous diseases. As to its etiology, when it occurs in persons under 40 years of age, it is probably due to one of three factors—alcohol, interstitial nephritis or syphilis. He believes that in persons under the age mentioned, syphilis is the most important etiologic factor of arterial degeneration, par-

ticularly in the absence of evidence of interstitial nephritis and alcoholism. Relative to the treatment, he endorsed the suggestions of Dr. Favill as to food, and freedom from care and over-exercise. While calomel was a great alterative, the chlorid of gold and sodium was in his opinion much better, in that it had a greater effect not only upon interstitial degeneration in arteries, but elsewhere throughout the body.

DR. ARTHUR R. EDWARDS of Chicago directed attention to the frequent confusion of the results of changes in the coronary arteries with cerebral disease. Especially was this true when the cases were seen in the last stages of the disease. Many cases are stricken down where a diagnosis of apoplexy is made, and in private practice the practitioner is frequently unable to either confirm or refute the diagnosis. Furthermore, the changes in the arteries of the heart muscle may produce insufficiency of the muscle and clinically a relaxation or dilatation of the left ventricle. With this relaxation of the left heart there is frequently found associated with it a systolic murmur. These cases coming under observation are frequently diagnosticated as valvular diseases, are called cases of mitral insufficiency, and yet, when followed out on postmortem the lesion is found not to be due to any valvular disease *per se*, but due to a lesion existing solely in the heart muscle.

With reference to treatment, diligent search must be made to ascertain the cause of the disease, as no treatment could be based on rational grounds that did not inquire into the cause and remove it when found.

Dr. J. B. MAXWELL of Mt. Carmel commended the remarks of Dr. Babcock relative to the indirect treatment of heart disease, in that they coincided with the speaker's experience. Physicians ought to be exceedingly careful in telling patients that they have serious heart trouble when they are consulted by them.

Dr. C. B. HORRELL of Colchester reported a case that he saw a few months ago in consultation. The patient had an extremely purple face with conjunctivitis. There was some blurring of vision. On examination he found a severe case of tachycardia with arterio-sclerosis. The patient was put upon a course of treatment similar to that indicated in the papers, and following it the patient began to complain of pain in the lower extremities, which at first simulated articular rheumatism, and finally multiple neuritis. He was satisfied that in this case the cord was involved rather than the cerebrum as a result of the sclerosis. Notwithstanding dietary measures and the administration of such remedies as had been mentioned, the patient gradually grows worse, and the prognosis is unfavorable.

Dr. HUGH T. PATRICK of Chicago said that cerebral hemorrhage practically never occurs, except by the rupture of a miliary aneurysm. Of course, there are exceptions to all rules, but this was a rule with few exceptions. Another point: Before the artery reaches the stage at which miliary aneurysm forms, there has been a thickening of the coats, a loss of elasticity and a diminution in the caliber of the artery; consequently many of the symptoms of cerebral trouble due to arterio-sclerosis are attributable more to the effect upon the entire artery than to miliary aneurysm.

In the treatment of arterio sclerosis, Dr. Patrick recommended very highly tetra nitrate of erythrol, which he says dilates the arterioles equally as well as nitroglycerin, and its effects were more lasting.

Dr. A. R. COLE of Kewanee said it has been his special privilege to see a number of cases of heart trouble in an apparently dying condition that rapidly recovered under the use of the old remedy—calomel. He especially recommended its use to the younger members of the profession.

Dr. JAMES B. HERRICK of Chicago spoke of venesection as a method of treatment in cases of myocarditis where there is extreme dilatation. This was brought forcibly home to him within the last year by seeing three cases that came into the Cook County Hospital with extreme dyspnea, amounting to orthopnea, with edema of the lungs, feeble pulse, marked cyanosis and the physical signs of extreme dilatation of the heart, without the findings that would convince one there was valvular disease. From the sclerotic condition of the radial arteries, the cases were looked upon as cases of fibrous myocarditis consequent upon arterio-sclerosis, where the musculature of the heart had become insufficient and extreme dilatation had occurred. It was considered more rational to relieve the extreme work of the heart than to stimulate the organ, and in these cases the greatest benefit was derived from abstracting from the veins from 8 to 16 ounces of blood. The rapid improvement that was apparent not only to the patient, but to the physicians who witnessed the operation, would convince any one that in some cases of dilatation of the heart venesection is of benefit. Dr. Herrick mentioned this in connection with the subject of arterio-sclerosis, as perhaps there was nowadays a tendency to discard venesection where in certain cases, at least, it is of benefit.

The discussion was then closed by the various essayists.

FIRST DAY—AFTERNOON SESSION.

Dr. ARTHUR R. EDWARDS of Chicago read a paper on

THE DIAGNOSIS OF MALARIA.

The diagnosis and the pathogenesis of malaria have a scientific life of scarcely two decades. In this time extreme views have been held by the profession. The skepticism greeting Laveran's discovery has given way to equally great credulity.

1. Diagnosis of the existence of malaria.—a. Positive blood findings establish the existence of malaria, the disease being always caused by the parasite, the parasite being practically always found in malaria and in malaria only. It must not be forgotten that malaria may occur simultaneously with other diseases, *e. g.*, ulcerative endocarditis, pulmonary tuberculosis, chronic nephritis, but never with typhoid. Atypical fevers, associated with chills and sweatings, which have few or dubious local findings and are hence difficult of diagnosis, can at least be differentiated from malaria, *e. g.*, anomalous typhoid fever, septico-pyemia occulta, generalized miliary tuberculosis, febrile gastritis, ulcerative endocarditis, suppurative cholecystitis, central pneumonia, deep-seated sarcomatosis, etc. *b.* Negative blood findings are not definitive from one examination. While suggestive, a single negative finding is far from conclusive. The parasites may be indistinguishable in the first few days of the disease; in certain forms and stages they swarm in internal organs only, and lastly, in recurrent and chronic types they are found with great difficulty only. *c.* Fallacies. Deformities in the red blood discs are often mistaken for plasmodia, *e. g.*, crenations, poikilocytosis, vacuole formation, plastic conditions of the hemocyte, which are more frequent than is usually recognized, melaniferous leucocytes, blood plaques, the small bodies, microcytes, frequently seen in anemia, etc.

2. *Diagnostic technique.*—Direct examination of the freshly drawn unstained blood is best, using forceps to avoid corpuscular alteration by the finger's heat and moisture, and only touching the drop of blood lest pressure cause precipitate drying of the preparation. Eosin staining, with methylene blue, is the best stain. Fresh preparations are best, since the dyes stain blood plaques and various artefacts, act as protoplasmic poisons, abolish the ameboid movement and pigment vibration.

3. Not only the fact but the type of malaria can be diagnosed. Determination of species not merely establishes the diagnosis, but declares the prognosis, as in pernicious types, and designates the treatment, as arsenic in tropical malaria. Crescents augur relapse. Segmentation forms predict an imminent or incipient paroxysm, etc. The various forms are distinguished from each other by differences in mobility, pigment, size, sporulation, changes in the red blood discs, protoplasm of the parasite by crescent formation and flagella.

4. *Diagnosis of individual malarial symptoms.*—The symptoms are not only immediate sequences of the malarial infection, but are beautifully explained by the life cycle, life activity and metabolism of the parasite, *e.g.*, the fever, melanemia, splenic tumor, hemorrhages, etc. The anemia is more rapidly induced than in any other disease. The triad of symptoms, fever, chills, sweating, are a "protozoan sepsis."

5. *The diagnosis juvantibus.*—Simulating diseases may recover under quinin or without it. Malaria exhibits great tendencies toward spontaneous recovery, *e.g.*, by phagocytosis, action of the fever, etc. Quinin cures tertain malaria with rapidity and certainty. Hence a diagnosis (at least of benignant tertian malaria, our sole endogenous form) of malaria is disproven by failure of treatment.

DR. C. W. HALL of Kewanee, read a paper entitled

THE SEQUELÆ OF TYPHOID FEVER.

He had learned the frequency of such sequelæ and their importance from a medico-legal aspect. The physician should always be on the alert for sequelæ and when he suspects the presence of one he should enlighten the family, ask for counsel and transfer the responsibility from his shoulders to theirs, and thus save trouble, if nothing else.

Dr. DANIEL R. BROWER of Chicago then read a paper entitled

AUTO-INFECTION IN ITS RELATIONS TO DISEASES OF THE NERVOUS SYSTEM,

in which he drew the following conclusions:

1. Some of the nervous diseases are the product of auto-intoxication.

2. That this autotoxis produces a parenchymatous degeneration of the nervous system, acute or chronic, that may result in the destructions of the structure and function of the nerve cells, (Van Gieson and Andriezen.)

3. The peculiar arrangement of the lymph channels in the nervous system makes auto-intoxication of the brain possible by the blocking of these channels.

4. The principal factors in this autotoxis are a disordered gastro-intestinal tract.

5. Gastrectasis, intestinal dyspepsia and coprostasis are ordinary conditions producing gastro intestinal intoxication.

6. The diagnosis is to be made by *a*, regional examination; *b*, by examination of the gastric juice and contents, and *c*, by examination of the urine.

7. The urines will show increased amount of indican, diminished total sulphates, but an increase in the amount of ethereal or conjugate sulphates.

8. There will also be found usually in consequence of this autotoxis a diminished hemoglobin record and a diminished number of red blood corpuscles.

9. The treatment should consist of lavage, enteroclysis, gastric and intestinal antiseptics, laxatives and hematinics.

Dr. HUGH T. PATRICK of Chicago read a paper entitled

REMARKS ON SPINAL IRRITATION.

He said that the term spinal irritation should be irrevocably banished from medical nomenclature. The pain and tenderness along the spine, generally known by this name, have nothing to do with the spinal cord or membranes or vertebræ or any other structure in this vicinity. He showed first that a normal person is unable to locate accurately a spot on the back previously touched, and secondly, that tender spots in so-called spinal irritation are located with the same inacurracy; that is, the examiner having found where the tender spot is, five or ten minutes later it will have shifted one to two inches. From this the following conclusions were drawn: 1, in so-called spinal irritation, there are always tender points along the spine; 2, these may be definitely located; 3, they may be shown to absolutely shift in position within five or ten minutes; 4, such rapid shifting demonstrates that the tender points are the result of purely functional disease, which disease is located not lower than the cerebral cortex.

(To be continued.)

Chicago Pathological Society.

Regular meeting, Feb. 8, 1897.

Dr. JAMES B. HERRICK, President, in the chair.

Drs. M. L. HARRIS AND MAXIMILIAN HERZOG presented a paper on

SOLID MESENTERIC TUMORS, WITH A REPORT OF A CASE.

The new case reported is that of a boy 5 years old, who came under the treatment of one of the reporters (Dr. Harris) in April, 1896. A large tumor, easily palpable, was found to fill the greater portion of the abdominal cavity; its surface was smooth, though somewhat irregular, the entire mass was as movable as the closely fitting abdominal walls would permit. From the relation of the tumor to the abdominal organs, especially to the colon, and from other data, a clinical diagnosis of solid tumor of the mesentery was made and an operation performed on April 13, 1896. The tumor was found as expected; it appeared to have started in the mesentery; a loop of intestine (jejunum) passing over it was attached to it and had to be removed with it (about 51 cm. long). The ends of the divided intestine were united end to end by the operator's (Harris') method. The patient's condition when removed from the table was quite critical, but he rallied and made an uninterrupted recovery. Ten months after the operation he was in excellent health and without any signs of recurrence.

The tumor, the pathology of which was studied by one of the reporters of the case (Herzog), is egg-shaped in its general outlines, the periphery of its longest axis measuring 57 cm. Histologically the growth proved to be a lympho sarcoma with extensive colloid degeneration. A remarkable histologic feature was the presence of colloid material found in the lumen of blood vessels. Sections of the growth had been embedded in celloidin as well as in paraffin, and had been stained with hematoxylon and eosin, orcein, and according to Van Gieson's methods.

DISCUSSION.

Dr. EMIL RIES—I wish to ask Dr. Herzog one or two questions. Were these specimens imbedded in celloidin?

Dr. HERZOG—Some.

Dr. RIES—Have sections been made from the fresh material?

Dr. HERZOG—No.

Dr. RIES—When I looked at the specimens just now, it struck me as remarkable that colloid masses formed in the arteries. The reason why I asked the question, whether sections were made from fresh material, was because I could not distinguish in the microscopic specimen the colloid mass from the celloidin.

With regard to the observation of vacuoles in colloid masses I wish to state that vacuoles can be found in celloidin. When the ether evaporates from the solution of celloidin unequally under different degrees of heat, the formation of vacuoles occurs. I do not doubt the presence of colloid masses in the cells and in other parts, but just this one mass in an artery is remarkable. I would like to ask Dr. Herzog how he thinks the mass got into an otherwise normal artery?

With regard to the case itself, I wish to add a few words concerning an observation of my own which belongs to this class of cases, although it is not a primary tumor of the mesentery. I observed a case of large sarcoma of the uterus, for which abdominal hysterectomy was made. Some thirteen tumors of various sizes were found in the mesentery besides the uterine tumor. Microscopic examination showed that it was a fibrosarcoma. In a few of the tumors of the mesentery remnants of mesenteric glands could be found, so that the glands could be recognized as the seat of the metastatic tumors. The patient made a good recovery, but returned about eight months after the operation with a recurrence from which she died. I understand the patient of Dr. Harris is still alive, and I wish to congratulate him on the result.

Dr. MAXIMILIAN HERZOG—You may see exhibited under the microscope some specimens containing vessels, the middle coat of which shows signs of a homogeneous degeneration; you can not see any nuclei, nor are the fibers themselves distinct in their outlines. Concerning the histology of the tumor under discussion, I reported to you what I found; among other things, I found in some of the vessels a homogeneous material, exactly like the material found elsewhere in the tumor. I have called this material colloid because it answers, as far as I can see, in every detail to the description of colloid material. How this material was formed in the vessels or how it got there, I am not prepared to explain in detail today. That the masses in the vessels are not thrombi is evident.

Dr. HEKTOEN—I think some further microchemic tests ought to be made before we are justified in speaking of this material as colloid, that is, if we use the term as we apply it, for instance, to the material found in the thyroid and other epithelial structures. If we use the term colloid as meaning any homogeneous material, then there is colloid material in these arteries and elsewhere. I have observed such substances in the vessels of tissues hardened in Müller's fluid, and I have thought that such colloid-like material might be a pure artefact.

Dr. HERZOG—There is a good deal of controversy today as to the limitation of the term, "colloid." Virchow discards the term entirely, and calls certain materials, which others call colloid, "gallertig." Recklinghausen classes what others call colloid with "hyaline degeneration." Ziegler and others describe as colloid, a degeneration which seemed to me to answer to the degeneration which I found in the tumor of the mesentery exhibited here tonight.

FOCAL OR INSULAR NECROSES PRODUCED BY THE BACILLUS OF TUBERCULOSIS.

Dr. E. R. LECOUNT read a paper with above title, of which the following is an abstract.

Focal necroses have been observed in consequence of various causes and in various organs. The substances abrin and ricin the former from the jequirity bean, the latter from the castor bean, the toxins produced by the diphtheria bacillus, the micrococcus lanceolatus, the typhoid bacillus or its toxins and the bacillus malleus, all may cause necroses as their initial lesions. They have also been observed in consequence of the injection of the blood serum of dogs into rabbits and in puerperal eclampsia.

These necroses occur mainly in the spleen, lymph glands and liver, but also in the intestinal epithelium, the peritoneum and in other viscera. Most instances of focal necroses as produced by the substances mentioned, are caused by the action of some harmful material circulating in the body fluids; less frequently they are caused by bacteria acting *in loco*.

These lesions are as a rule minute and frequently only to be found in the course of a routine microscopic examination. They are characterized by a degeneration of the fixed cells of the organ or tissue in which they occur and then affect as a rule mainly the essential cells. In some instances simply loss of staining capacities (karyolysis), is found to form the only change in the nuclei of the cells, in other instances karyorhexis fragmentation of the nucleus results, and again these are frequently found associated in the same area of necrosis.

With these changes in the nuclei, fibrin is frequently formed as the result, in part at least, of exudation (coagulation necrosis). In certain instances the necrotic area is invaded by polymorphonuclear leucocytes as in the so-called lymphoid nodules seen in the liver in typhoid fever.

Nuclear fragmentation results in the accumulation of numerous ball like granules of chromatin which stain intensely with nuclear dyes. Necroses of this variety have been observed by R. Kockel in experimental tuberculosis of guinea-pigs, but the areas observed by this author in the liver were ascribed by him to ischemia. Pilliet also described necroses in the liver in tuberculosis in animals, but did not believe them to be due in any respect to the direct action of the bacillus of tuberculosis. Leredde in an article upon acute and subacute human tuberculosis, has depicted visceral necroses which have apparently resulted from venous hyperemia, which resulted from interference with the pulmonic circulation.

Case 1.—A case of chronic ulcerative tuberculosis of the lungs, showed in the spleen and liver, areas visible only with the microscope which corresponded in all respects histologically, to other forms of focal necrosis observed in diphtheria, abrin poisoning, etc. They were on an average, the size of a normal glomerulus in the kidney of an adult, and were made up of necrotic cells, nuclear fragments and fibrin and in them the bacillus of tuberculosis was invariably present in small numbers. No leucocytic invasion had occurred into the area, no giant cells were present, no other bacteria could be demonstrated nor were any changes present in the adjacent small arterioles or capillaries, such as thrombosis. Consequently these areas differed histologically from tubercles.

Case 2.—A case of chronic peritoneal tuberculosis in which exactly similar areas were found in the spleen. In the liver, however, typical microscopic tubercles were present.

Case 3.—A case of tuberculosis of the retroperitoneal lymph glands which anatomically simulated the enlarged lymph glands seen in lymphatic leukemia. No caseation was visible to the naked eye, but microscopically irregular confluent areas of necrosis were found present, mainly affecting the peripheral parts of the gland and these also contained the tubercle bacilli. From the resemblance of the areas of focal necrosis in these three cases to all other described instances of focal necrosis and the fact that they contained within them the bacillus of tuberculosis and no other bacteria, it was concluded that the action of the bacillus of tuberculosis upon the tissues is not such as to invariably produce that combination of proliferative and exudative changes which is called a tubercle. The absence of proliferative changes which are by most authorities accepted as phenomena of tissue resistance or reaction was in direct accord with the marasmus present in all three cases.

DISCUSSION.

PROFESSOR KLEBS—These necrotic processes in cases of tuberculosis are interesting, and I am quite familiar with them in guinea pigs. Necrotic areas occur in the liver and form cirrhosis of the liver. I have not seen these necrotic processes so frequently in man. I remember to have seen cases in which there were necrotic areas in the spinal cord, the brain and the kidneys. I have almost always found that necrotic processes in tuberculosis were not caused primarily by the toxins of tuberculosis, but by obstruction of the vessels. There is a great difference between the toxins of tubercle bacilli and those of other diseases. Large necrotic areas are observed in bacterial processes. These necrotic processes develop in the kidney sometimes in a comparatively short time, and we have an enormous quantity of the toxins thrown out by the diphtheria bacilli, the cholera vibrio, etc. The most extensive toxic necrosis I have described in the kidneys of Asiatic cholera. As to the distribution of the toxins in bacteria, there are very great differences. In typhoid bacilli there are considerable quantities of toxic substance contained in the bodies of the microbes, but not so in tuberculosis.

I have done considerable work toward finding out the composition of the tubercle bacilli and I have tried to prepare toxins from their bodies but I have not had any results. All the toxins are in storage in the fluid culture; there they are to be considered as secretion products. The quantity of the toxins in the bodies of the tubercle bacilli is not quite a fourth of that in the whole culture formed by four to five grains of dry tubercle bacilli in five or six weeks. So the quantity of toxin formed in a few tubercle bacilli must be very small. From this cause I do not think they are formed in such quantity that the necrosis is produced directly by them in the same way as it is in diphtheria or cholera. I have always held the opinion that necrosis in tuberculosis was formed by obstruction of vessels. Wherever tubercle bacilli are deposited, there we first observe obstruction of vessels, also in dissemination of the tubercle bacilli in the blood, particularly in cases of miliary tuberculosis. It is shown by Roux and Yersin and myself that by injecting living tubercle bacilli in the blood, the greatest part of them is killed in the blood. Otherwise obstruction of vessels is an important factor in the formation of necrotic masses. I would remark also that this necrosis, if I understood Dr. Le Count rightly, is found mostly in the spleen, and, secondly, in the liver. Those are the organs in which obstruction of vessels is of frequent occurrence. In the spleen we have very extensive capillary circulation, the blood current is slow, and obstruction likely to occur. In tuberculosis of the spleen wedge-shaped, yellow infiltrations occur as well as in the liver of guinea pigs. I have frequently found in tuberculosis of the kidneys, occurring in older persons, very small atrophic spots on the surface of the organ, which were perhaps the consequence of necrotic processes. I have seen similar atrophies in the brain and spinal cord.

I think the fibrinous matter that is found in the necrotic parts points toward obstruction of the vessel. It is not necessary that this obstruction should be caused by thrombi. It may be due to stasis in the vessels as it is found in the diphtheritic mucous membranes. We can have obstruction of the vessels by other substances than thrombi; as if the vessels are enormously dilated and filled up with red blood corpuscles compressed against one another, or there are formed thrombi of blood plates—after the injection of Koch's tuberculin. The presence of the fibrinous matter in the necrotic parts would favor the opinion of obstruction in the vessels.

DR. LE COUNT—The idea that these areas of necrosis might be due to obstruction to the circulation was not neglected; a careful search was made for thrombotic processes in the vessels and at the same time the relation the areas bore to the vessels was thoroughly examined by means of serial sections. Any reasons for ascribing the necrosis to interference with the circulation could not be found; nor were thrombosed capillaries found. The additional facts that tubercle bacilli were invariably present in the areas of necrosis, that these lesions were present in cases of well marked cachexia and that in the spleen they were diffusely scattered throughout, not located near the capsule as areas of ischemic necrosis are liable to do, seem to support the position taken.

We likewise can not overlook the researches of Abtl, who injected tubercle bacilli into the trachea of rabbits and found twenty-fours later small whitish isolated areas in the bronchi and lung alveoli which proved microscopically to be areas of necrosis, in which proliferative changes occurred two days later. Concerning the action of toxins which Professor Klebs refers to, there is a marked difference between the lesions at present described in the literature as "focal necrosis" and the changes produced in the kidney either by diptheria or cholera toxins, in that the latter do not occur in foci, indeed the necroses produced in diphtheria and described under the term focal do not include those which are found in the kidney.

In conclusion I wish to state that it is my firm belief that the bacillus of tuberculosis in exceptional instances can produce necrosis as a primary effect upon the tissues, as seems to be demonstrated in these specimens, but that in the majority of instances the effect as Baumgarten has stated is to cause primarily proliferative and exudative phenomena.

SPECIMENS.

Dr. E. R. LECOUNT—I have here two specimens which were removed today from the same body. They are not without interest and also show well on account of their fresh condition. The first is a *calculus* imbedded in the substance of the kidney. As you can see, it is L-shaped, half as large as the little finger, and lies apparently in a dilated calyx.

The second is a *mesentery* for the gall bladder, forming a pendulous gall bladder. The "mesentery" measures one inch in breadth at its widest portion and gradually narrows as the cystic duct is approached. One and one-half inches of the cystic duct are also suspended in the "mesentery." There is entire absence of the furrow for the gall bladder, so that the lobus quadratus is directly continuous on the right side with the right lobe of the liver. There is also absence of the notch which occasionally forms the termination of the groove for the gall bladder. Both of these specimens came from the body of an old man who died of empyema and purulent bronchitis.

Dr. JAMES B. HERRICK—I present a specimen of *aneurysm* of the right auricular appendix. I am indebted to Dr. Hektoen for the privilege of exhibiting it. There is nothing known of the clinical history, the heart having been obtained by the coroner's physician.

The pericardium shows no change. The heart is rather large in size and shows left and right ventricular hypertrophy. The coronaries are sclerotic. The valves of the heart show slight thickening, but nothing can be proven to have resulted in a clinical valvular lesion. The aorta shows some calcareous plaques. The point of interest is that at the tip of the right auricular appendix there is a sac-like projection,

the long diameter of which is about 2 cm. and the walls of which are perfectly translucent, and which is wholly made up of endocardium and epicardium. We have, therefore, an aneurysm of the right auricle. A similar one, though smaller, is found in the left auricle. There is no evidence of inflammation of the pericardium, endocardium or auricular myocardium. We can scarcely look upon this as an aneurysm the result of myocarditis, which is the common cause of aneurysm. It would rather seem to be due to a separation of the muscular fibers in the auricle, either through congenital or acquired weakness, and a hernial protrusion of the endocardium. It can readily be seen that this point of weakness is also a point of danger, and that a rupture of such a hernia of the endocardium would be followed by the most serious consequence in the shape of hemorrhage. The auricle itself is comparatively rarely the seat of an aneurysm; the commonest place being the left ventricle, particularly near the apex; the septum, particularly near the membranous portion; the right ventricle, and lastly the auricle.

Dr. KARL F. M. SANDBERG—This specimen of *extra-uterine pregnancy* was removed this morning from a woman who has had three children and one abortion. She menstruated the last time on November 12. On December 29 she had a spasmodic pain in the lower part of the pelvis, and during January of this year she had a repetition of the same pain three or four times. There was an irregular loss of blood through the vagina at different times. She consulted her family physician, Dr. A. B. Oyen, who promptly made the diagnosis and referred the case to me. The specimen shows a pregnancy in the distal two thirds of the right tube with the ovary located posteriorly, the fimbriated extremity of the tube attached to the same. The specimen was removed entire without having been ruptured or opened. It was located in the cul-de-sac of Douglas and universally adherent with the exception of about one square inch of the top part. The lowset portion is apparently the softest part, the easiest to rupture, and in this case a rupture would not have occurred into the broad ligament, but into the peritoneal cavity, remaining separated from the general peritoneal cavity by the adhesions. The pregnancy after rupture would very likely have gone on, the adhesions gradually moving up higher and higher, and the fetus developing in the cul-de-sac of Douglas, gradually pressing higher up, and in this way the woman might have had a good chance of going to full term. I will pass the specimen around without opening it.

The Medical Society of the County of New York.

Report to the Medical Society of the County of New York of its Committee on the Abuse of Medical Charity. Transmitted May 24, 1897.

Mr. President and Gentlemen:—In accordance with a resolution acted upon at a meeting of this Society held in October last a committee of eleven members was appointed to devise means for the control or correction of the abuse of medical charity now existing in this city. This committee was made up as follows: J. H. Burtenshaw (Chairman), A B. Ball, Hermann J. Boldt, E. S. Bullock, Henry D. Chapin, Carter S. Cole, Alexander Hadden, William M. Polk, W. Washburn, W. H. Weston, and F. H. Wiggin.

At the first meeting of this committee two steps were decided upon: 1, to ascertain the sentiment of the governing boards of the different dispensaries regarding the proposed effort to check indiscriminate dispensing of medical aid, and 2, to communicate with the Charity Organization Society of the City of New York with the object of ascertaining if a system might be devised whereby the worthiness of applicants for dispensary treatment might be investigated and reported, and if its coöperation might be relied upon to this end.

As a result of the last named resolution the fact was made known that the Charity Organization Society would willingly coöperate with this Society along the lines proposed, and that it would place its general offices and staff of assistants at the service of the County Medical Society free of cost, provided the extra expense attendant upon the proposed investigations was met by contributions from other sources.

In order to determine to what extent the coöperation of the dispensaries might be relied upon a copy of the following letter was sent to the president, secretary or physician in charge of each of the ninety-five dispensaries located in this city.

[COPY.]

NEW YORK, Feb. 13, 1897.

Dear Sir:—The committee recently appointed by the Medical Society of the County of New York to devise means to correct the abuses of medical charity now existing in this city, respectfully asks for answers from you, in your official capacity as an officer of one of the free medical dispensaries, to the subjoined questions:

1. Does the governing board of the Dispensary approve of the movement to abolish or regulate the abuse of medical charity?

2. Will the governing board coöperate with the committee of the Medical Society of the County of New York and endeavor to dispense free medical treatment only to those applicants that are deserving and unable to pay a physician for such services?

3. Will the governing board agree, at such time as called upon, to display in conspicuous places in the Dispensary a placard reading somewhat as follows: "On and after [date] the case of every patient applying for free medical treatment at this Dispensary will be investigated, to determine if the applicant is deserving of free medical service," provided such agreement is not to be construed as binding the Dispensary to make such investigations on its own account?

[Signed] On behalf of ———— Dispensary.

Replies to this letter have been received from seventy-six dispensaries. Of the nineteen dispensaries ignoring the first circular letter, and a duplicate sent out on the April 1, five are homeopathic, two are under the supervision of the Department of Charities, and the remaining five are either private or church institutions at which but a small number of patients living in the immediate vicinity are treated. These replies were affirmative, or conditionally affirmative, to all three questions, with the exception of those received from the Dispensary of St. Mary's Free Hospital for Children, located at 435 and 437 Ninth Avenue, and the Out-Patient Department of the New York Hospital, 21 West 15th Street.

The Dispensary of St. Mary's Free Hospital for Children treated 7,101 patients during the year 1896, and during the same time the Out-Patient Department of the New York Hospital treated 9,803 new patients, who made 45,838 visits to the dispensary, a majority, it is understood, being required to pay one dollar per month for the treatment received regardless of financial condition.

At a succeeding meeting of your committee it was made known that a committee having in view the same object as its own had been appointed by the County Medical Association, and that an organization known as the New York Medical Society for the advancement of the Practice of Medicine had been formed and on March 22 had caused to be introduced in the Legislature of the State a bill embodying certain reforms in the management of dispensaries in this city. It was the opinion of your committee that certain features of this bill were of too radical a nature to allow of its becoming a law at the present time; that any enactment designed for the control dispensaries should apply to the entire State rather than to the City of New York alone; that, in the former case, the supervision and control of dispensaries should be placed in the hands of the State Board of Charities; and finally, that as far as practicable, the efforts of the different committees formed for the same purpose should be directed along the same lines. Your committee feels that great credit is due the members of the New York Society for the Advancement of the Practice of Medicine and the members of the committee of the County Medical Association for their efforts toward the control of the charity abuse and thanks for their hearty coöperations with your committee toward this end.

The bill introduced in the Legislature by the first named organization was ultimately amended so that its provisions read as follows:

SECTION 1. By this act a dispensary is defined to be any institution, agency or place, society or association whose actual or alleged purpose it is to furnish gratuitously or at a nominal price to indigent, needy or other persons not resident therein, medical or surgical relief, advice or treatment, medicine or orthopedic or other appliances.

SEC. 2. On or after the first day of October, 1897, it shall not be lawful for any one to establish, conduct or manage at any place in this State a dispensary not duly incorporated as such under the laws of this State, or not connected with another corporation and licensed by the laws of the State Board of Charities.

SEC. 3. In no case shall a dispensary be established, carried on or conducted in any place in this State commonly known as a drug store, nor in any place or building in the

State defined by law or by an ordinance of a board of health as a tenement house.

SEC. 4. It shall not be lawful for any person or persons to display the word "dispensary" or to cause the same to be published in any form or in any manner in order to attract any indigent, needy or other person to any dispensary not duly incorporated or licensed as provided in Section 2 of this act.

SEC. 5. Any person who shall by means of any wilful false representation on his or her part obtain at any dispensary medical or surgical relief, advice or treatment, medicines or orthopedic or other appliances, or any person who shall wilfully violate any of the provisions of this act shall be guilty of a misdemeanor, and upon conviction shall be required to pay a fine of not less than $50 nor more than $250.

SEC. 6. The State Board of Charities is hereby empowered to make rules and regulations and to alter and amend the same when in its opinion necessary, in accordance with which indigent, needy or other persons shall be given medical or surgical relief, advice or treatment, medicines and orthopedic or other like appliances by such duly incorporated or licensed dispensaries, and the said Board is empowered, a chance for a hearing having been given, to annul the corporation or suspend the operations or to revoke the license of any dispensary for wilful neglect or failure on the part of its managers, trustees, officers or employes to comply with the rules and regulations so established by said Board, but nothing in this act contained shall be considered to mean that said Board shall have power to determine the particular school of medicine under which the dispensary shall be conducted.

SEC. 7. All acts or parts of acts inconsistent with the provisions of this act are hereby repealed.

SEC. 8. This act shall take effect on the first day of October, 1897.

This bill has passed without a dissenting vote by both Senate and Assembly on April 14, last, but up to the present time has not received the signature of the Governor. This fact is peculiarly unfortunate as, according to the law of the State, all bills that do not receive the approval of the Governor within thirty days of the adjournment of the Legislature, lapse and become void, and in the present instance this time limit expires at twelve o'clock tonight. This failure on the part of the Governor to approve the bill can perhaps be attributed only to the pressure of official business, as at the date of adjournment of the Legislature on April 24, there were more than 700 enactments awaiting his signature.

The president of this society, your committee, the president of the County Medical Association and the members of its committee and the members of the Society for the Advancement of the Practice of Medicine have thoroughly appreciated the importance of this bill and the necessity of its becoming a law, and every influence at their command has been brought to bear toward this end. As no opposition was made to the passage of the bill in either branch of the Legislature, and as the profession, not only in this city but throughout the State, is practically unanimous in commending its main features, the sense of disappointment is the more keen at the failure of the Governor to stamp the measure with the seal of his approval.

In anticipation of the bill being signed, the State Board of Charities, at a meeting held April 14, last, appointed a committee of three of its members to hold public meetings immediately after the bill became a law for the purpose of receiving suggestions regarding the promulgation of rules for the management of dispensaries, and it was the intention of your committee to ask for authority from this Society to represent it before that body. In view of the failure of the Dispensaries Bill to become a law, your committee is in a position only to recommend that the Committee on the Abuse of Medical Charity be continued indefinitely, and that it be empowered to take such steps as may appear to it advisable toward obtaining future legislation in the direction of correcting or controlling the medical charity abuse.

* * * * *

In conclusion, your committee expresses the conviction that there is no species of charity so beneficent, so far-reaching or so generously bestowed as true medical charity, and that nothing could be further removed from its wish than that it should be curtailed or kept from the reach of the deserving poor; but it has been so conclusively demonstrated that there exists such gross and unpardonable abuse of that charity on the part of those who are not entitled to it that it has become imperative to adopt radical measures for the suppression of that abuse and at once. Respectfully submitted,

[Signed] JAMES HAWLEY BURTENSHAW, Chairman.
EARL SPRAGUE BULLOCK, Secretary.

Committee: H. J. Boldt, Henry D. Chapin, F. H. Wiggin, A. B. Ball, W. M. Polk, Alexander Hadden, Carter S. Cole, W. Washburn, W. H. Weston.

PRACTICAL NOTES.

Uterine Fibroma.—It is a familiar fact that fibrous tumors of the uterus sometimes grow in size during pregnancy and then decrease, afterward undergoing an involution similar to that of the uterus, especially if the woman nurses her child a long while. Howitz of Copenhagen draws the conclusion that pregnancy and prolonged nursing should be recommended to patients suffering with fibromas of the uterus. As pregnancy under these circumstances, however, is not devoid of danger, he proposes to substitute artificial stimulation of the mammary secretion by aspirations of the nipples morning and night, for five to ten minutes. Three cases thus treated have found the fibroma diminish in volume, in others there has not been any perceptible change, but the period of treatment has been too brief to be conclusive. Milk appeared in abundance in one case, and in four others after one or two months of the aspirations. He states that he has seen more than once a flow of milk, even in a virgin, the day after interuterine injections, which shows the close connection between the uterus and the mammary glands.—*Ann. de Policl. de Toulouse*, February.

Treatment of Fractures with Massage Exclusively.—Woolsey's prognostications of the future of this method of treatment (see the JOURNAL, May 1) are strikingly confirmed by the remarkable results obtained by Lucas-Championnière in fractures of the clavicle treated exclusively with massage, as shown by four men he exhibited recently at the Académie de Médecine (*Bulletin*, April 6), who could move their arms in every direction without pain, on the eighteenth, nineteenth and thirtieth days respectively. All were serious fractures from falling from a bicycle going at full speed, etc. A light sling had been used to rest the arm for a few days. One, a mechanic, had been able almost from the very first to resume his work. The pain disappears very rapidly with the massage, and the bone is solid at a period when no one would venture to look for solidification with the usual treatment. The formation of the callous is at least as rapid, if not more so, than with an immobilized bone. The perfect suppleness of the region, the normal play of all the muscles of the arm and shoulder, and the final absence of riding, important in the rare female cases, leads him to recommend the method to all. He has now an experience of thirty-one fractures of the clavicle thus treated, and states that even before the solidification is complete, the patient can wait upon himself and continue his daily occupation to a certain extent without difficulty.

Sympathetic Amblyopia.—Besides iridocyclitis and optic neuritis, there is another sympathetic complication of injuries to one eye, which may possess legal importance and yet be mistaken by many practitioners. Professor Nuel has observed sixteen cases of it in his practice in an industrial town where injuries from flying scraps of metal are frequent. It is a severe affection, tending to blindness, but has always yielded readily to appropriate treatment. The noticeable points are its tardy manifestation and the absence of ophthalmoscopic signs. It may not appear until six months or a year, or even two, after the original accident. The sight varies from good to bad, at intervals; there is sometimes frontal or temporal pain, and a heavy feeling in the head, while the visual acuity is reduced. After a while these symptoms pass away and the sight seems normal, but the improvement is only transient and the amblyopia continues its progress. Slowly the sight is decreased to 5—36 or 5—60 by the end of a year or so; sometimes the patient can only count fingers at a meter or less. The maximal restriction of the field of vision was 10 to 15 degrees in his cases, and he has never seen amaurosis ensue. By the end of two years the optic nerve is more or less atrophied and sclerosed, but the ophthalmoscopic degenerations are very secondary and tardy. Mercurial frictions and smoked glasses, with functional rest, produce great improvement, but the industrial capacity of the patient is diminished and possibly abolished. The sight may still be good, but close application may bring on absolute blindness. The possibility of this affection should therefore be borne in mind by the medical adviser, as the damages from the primary accident may have long been settled before it appears.—*Ann. de la Soc. Méd. Chir. de Liège*, January.

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INFORMATION WANTED.

It would greatly facilitate the prompt delivery of the JOURNAL to those members of the ASSOCIATION living in large cities, if they would kindly furnish this office with their street address in those cases where it is omitted from the wrapper of their JOURNAL, as we have been notified by the postmasters of the larger cities that second-class mail matter not having street address, would be placed in the general delivery to await call.

SATURDAY, JUNE 5, 1897.

MEDICAL EDUCATION.

A strong impression exists among many persons that medical teaching and education today is most faulty and imperfect; also that the great universities of this country and Europe have reached a degree of perfection that would make them models for all educators.

Many persons are convinced that only a classic training in the university colleges can properly fit a man for the study of medicine. Now we are told by the deans of some of these colleges, that their system of training is very imperfect and crude in its methods; also that they are anxiously looking around for improvements and trying to break away from the prestige and old-time forms of teaching.

There is something very refreshing in this awakening of educators in the higher centers of learning. The dogmatic egotism which has centered around some of the great universities of this country is lifting and we begin to realize that educational methods in its highest forms are still very crude. While medical training and the standards of medical colleges are very far from the ideals which have been marked out, there is a restless movement and struggle upward which promises much for the future.

The literary colleges and great universities still more are apathetic and the same studies are taught in the same way as half a century ago. Science schools and new departments of learning must of course go on without prestige and follow new lines of presentation, but even here the obvious imperfections of teaching methods are clearly recognized. The medical men who urge so strenuously that a classic training in a literary college is an absolute essential as a foundation for a medical training are very often good examples of the folly of such training. Men with literary degrees from the best colleges are very often poor, weak medical men. The prize and honor men of the great literary colleges are rarely heard of in after-life in any department of human activity. Literally the high classic training demanded as a requisite to enter upon the study of medicine is often a most serious obstacle to all future success. This is clear in the fatal egotism of the college graduate, who has been taught that his studies of the languages has raised him above the level of others and made success a greater certainty in any direction. Where this follows, in all after-life he is crippled and fails to attain the level of a student and original worker.

The fault is in the college methods, they have literally unfitted the man for close, hard work and broad reasoning. They have cultivated a strong personal bias in his capacity and superiority that is fatal to good work afterward.

Fortunately this does not occur in all cases. Many college graduates rise above the narrowness of so-called culture and make a culture and acquire an independent knowledge for themselves.

We do not wish to discourage a thorough preliminary training before entering upon the study of medicine; but the idea that a degree from any college is evidence of such training is not true in many cases. While the medical colleges are extending their courses and requiring more thorough preparation before entering, they can not reach the end sought for in a thoroughly educated profession by accepting the diplomas of colleges without question or examination. While we all recognize that graduates of the leading medical colleges may be very scantily equipped for the practice of medicine, it is a notorious fact that men with diplomas from the most famous institutions in this country are often very weak and uncultured. This is true the world over, the English or German student who has spent ten or more years at the great seats of learning may not have acquired the first principles of culture.

Evidently a great revolution is beginning in this direction, from the common school up to the highest universities and technical colleges. Men must be trained up to do the work along the lines of natural adaptability and not trained down opposed by constitutional and physiologic conditions of the organism. A leading college president said, "We are constantly making the mistake of training men out of their natural capacities, teaching them facts that are useless rubbish in all after life." The idea can not be repeated

too often, that no training can make a medical man who has not some constitutional adaptability and tact for the work. No colleges can graduate educated, cultivated men by the present indiscriminate methods applied to all, without regard to ability or personality. What will be required in the future will be some test of the character and capacity of the student for the life-work he would engage in; then training becomes exact and development and culture positive and certain.

IDIOT SAVANTS, ARTISTS AND MUSICIANS.

One of the prominent features of the co-eval discussion of the relation of genius to degeneracy is the discovery of idiot savants, artists and musicians. These result from the phenomenon of degeneracy removing that check on expression of ideas which results from timidity and also checks which have existed on the expression of "unconsciously assimilated" ideas. In ordinary life, as well as to a less extent among the idiots and insane, much is unconsciously assimilated by the mind, but remains without association with the daily life of the assimilator. Dr. LANGDON DOWN (*Alienist and Neurologist*, Vol. viii) applies the term "idiot savants" to children who, while feeble-minded, exhibit special faculties which are capable of being cultivated to a very great extent. One youth was under DOWN's care who could build exquisite model ships from drawings, and carve with a great deal of skill, yet could not understand a sentence, had to have his food cut up for him and when writing to his mother, copied verbatim a letter from "The Life of Captain HEDLEY VICARS," by Miss MARSH, although it had not the slightest appropriateness in word or sentiment. Another under his care could draw in crayons with marvelous skill and feeling but in whom nevertheless there was a comparative blank in all the higher faculties of mind. Extraordinary memory is often met with, associated with very great defect of reasoning power. A boy came under DOWN's observation who, having once read a book, could evermore remember it. He would recite all the answers in "Magnall's Questions" without an error, giving in detail the numbers in the astronomical divisions with the greatest accuracy. This, however, was simply a process of verbal adhesion. DOWN once gave him GIBBON's "Rise and Fall of the Roman Empire," to read. This he did, but on reading the third page he skipped a line, found out his mistake and retraced his steps. Ever after, when reciting from memory the stately periods of GIBBON, he would on coming to the third page, skip the line, go back and correct the error with as much regularity as if it had been part of the regular text. Later on, his memory for recent reading became less tenacious but his recollection of his earlier readings never failed him. Another boy told the tune, words and number of nearly every hymn in "Hymns Ancient and Modern." Often memory takes the form of remembering dates and past events. Several children under DOWN's observation have had this faculty in an extraordinary degree. One boy never failed to be able to tell the name and address of every confectioner's shop that he had visited in London, and they had been numerous, and could readily tell the date of each visit. Another could tell the time of arrival of all children at the institution, and could supply accurate records in relation to it if needed. Another knew the home address of every resident who came under his observation and they were by no means few. The faculty of number is usually slightly developed with feeble-minded children, while memory is fairly well developed. There are cases where the power of mental arithmetic existed to an astonishing extent. One boy about twelve years of age who could multiply any three figures by three figures with perfect accuracy, and as quickly as DOWN could write the six figures on paper, yet so low mentally was he that although having been for two and a half years in the almost daily habit of seeing and talking to DOWN he could not tell his name. Another boy under DOWN's observation could multiply two figures by two figures and a short time since could multiply three figures by three figures, but, since an epileptiform attack, has lost this faculty to some extent. None of them can explain how they do it. When by rare chances they have made a mistake and some hesitation has arisen the plan has been to clear off the multiplication of the higher figures, first.

Improvisation is an occasional faculty. A boy under DOWN's care who could take up a book, pretending to read, an art he had not acquired, and improvise stories of all kinds with a great deal of skill and in variety to suit the supposed tastes of his author. Memory of tune is a very common faculty among the feeble minded; they readily acquire simple airs and rarely forget them. One boy if he went to an opera would carry away a recollection of all the airs and would hum or sing them correctly. In none of his cases of "idiot savants" has DOWN been able to trace any history of a like faculty in the parents or in the brothers and sisters. He has had an opportunity of making a necropsy only in one instance. This was in the case of a boy who had a very unusual faculty, the perfect appreciation of past or passing time. He was 17 years of age, and although not understanding, could gather the use of a clock face, could tell the time to a minute at any part of the day and in any situation. Although DOWN tried him on numberless occasions he always answered with an amount of precision truly remarkable. Gradually his response became less ready. His health became enfeebled and the faculty departed. On necropsy DOWN found that there was no difference in the cerebrum from an ordinary brain except that he had two well-marked and

distinct soft commissures. All these cases of "idiot savants" were males. DOWN has never met with a female. The most remarkable instance of the idiot musician in the United States is that of "Blind Tom," who is now about 60 years of age and who, like the cases mentioned by LANGDON DOWN, could play from memory any tune or modification of a tune which he had once heard. After making thousands of dollars for the master who once owned him, he was placed under a conservator, the daughter-in-law of his owner. When placed under her charge he was practically penniless, despite the hundreds of thousands of dollars he had earned in a quarter of a century's musical work for his master. In a few years after being placed under guardianship, sufficient money was obtained to warrant the temporary withdrawal of "Blind Tom" from the amusement world, so that he might recuperate his health and at the same time familiarize himself with modern musical composition.

Tom enjoys his long rest after so many years of incessant travel and work. He does very little visiting among his neighbors and receives few callers at his cottage. He passes hours at a time at the piano playing his old pieces and practicing new ones. Occasionally he attempts improvisation, but even then the imitative faculty predominates, as the notes he picks out are usually the reproduction of sounds that he has heard.

When not at the piano, Tom amuses himself by imitating the small talk of ladies and other visitors, to which he is a silent listener. He holds imaginary receptions at which the weather, new styles in dresses and like topics are discussed by the imaginary visitors, as imitated by Tom, in a way that is very comical. This he will not do if he knows there is any one listening to him. In spite of his advanced years and his reserved, formal demeanor in company, Tom is merely an overgrown child and has to be carefully watched by the male nurse especially hired for that purpose. He has all the selfishness of a spoiled child and is jealous of any attention paid to any one else in his presence. He has little natural affection and cares only for those around him who minister directly to his wants. He is willing that his mother should be taken care of out of the money he has earned, but he does not wish to have her or his brothers and sisters near him, for fear that they may annoy him or prevent his being the sole object of attention to those around him. With the exception of this child-like selfishness, "Blind Tom" is extremely religious in his habits and disposition. He never eats without first offering prayer, and on Sundays will play only church music on his piano. Soon after Tom was placed under guardianship, his mother met him for the first time since his infancy, but after the novelty of the reunion had passed away, it was evident that their tastes and temperaments were so utterly antagonistic that there was little hope of their living happily together.

Art and music were very early acquirements of the race, hence it is not astonishing that atavistic returns to soundness in the idiot, imbecile, paranoiac and degenerate should take these particular directions.

THE CRIMINAL RESPONSIBILITY OF THE INSANE.

The legal standard of responsibility given in the famous answer of the judges to the House of Lords in connection with the celebrated MCNAUGHTON case which still stands in the laws of England and many at least of its dependencies, and which has been to a certain extent adopted in this country, has always from the first had the disapproval of competent alienists, those who of all men, are best qualified to estimate the responsibility of the mentally defective. They have used every argument against it, have proved that it is a false criterion in almost every possible way, have shown clinically and pathologically its incorrectness, but have not as yet been able to thoroughly eradicate the belief in its validity from the legal mind. Even in this country where we are in no way bound legally by this utterance, given out at a time of great popular excitement comparable to that which existed while the GUITEAU trial was in progress, judges still charge juries and juries convict lunatics on the ground that knowing the nature of their acts they are responsible and fit subjects for the fullest punishment the law allows for their crimes. That this is not done universally in England, that judges often evade the doctrine, and where they do not do this juries sometimes "take the bit in their teeth," as an English magistrate has expressed it, and acquit a lunatic against the judicial charge and interpretation of the law, is a sign that the world does move in spite of legal conservatism. It is not an equally good indication that the English doctrine should have here the weight it so often seems to have, and that this irrational barbarism, in spite of many better precedents still enters to any extent whatever into our judge-made laws.

In Canada, where the principle of the answer of the judges is incorporated into the criminal code, they are worse off than we, and judicial murders would seem to be legally necessitated in a large proportion of the cases where lunatics are tried for capital offenses. In view of this condition of affairs, and seeing the hopelessness of ordinary argument or theoretical demonstrations in amending the situation, one of the leading asylum superintendents, Dr. R. M. BUCKE, in his late annual report, gives the result of a careful canvass of the capacity for moral judgments of the inmates of a large asylum, with special reference to their legal responsibility under the Canadian law. He finds, and there is no reason to doubt his ability to correctly estimate their capacity for moral judgments, that out

of a total number of 1,034 inmates of the London Asylum no less than 763 were perfectly capable of realizing and appreciating such an act as homicide in its moral and legal relations. Of the remaining 271 inmates 121 were intellectually able to express an opinion but were apparently morally obtuse and disclaimed any repulsion to the act or knowledge of its wrongfulness. Only 150 out of the whole number were unable on account of their mental condition to intelligently answer the questions or give any index to their moral perceptions.

In other words, nearly three-quarters of all the inmates of the asylum were responsible and fit subjects for capital punishment under the criminal law as it exists today in Canada. At the same time, as asylum inmates they were civilly incapacitated from making the most unimportant valid contract, criminally responsible and civilly irresponsible, a paradox that seems to give no solicitude to Canadian lawmakers and lawyers. It is true as, Dr. BUCKE admits, that the fact itself of their being inmates of an insane asylum would be taken as *prima facie* evidence of their irresponsibility and that an asylum inmate would not suffer the penalties of the law for criminal acts committed as such, whatever might be his status under the strict wording of the code. But he points out the fact that there are many just as insane outside of the public institutions, and that the mere fact of having been thus sequestered or otherwise, does not morally and should not legally affect the question when insanity actually exists. As an instance of the working of the Canadian law, Dr. BUCKE refers to a recent case where the prisoner was not merely proven insane, but was a recognized imbecile, but the fact that he was capable of appreciating the wrongfulness of the act he had done according to the judgment of the court and jury insured his conviction and sentence. As a similar instance in this country, and a very prominent one, the conviction and execution of the imbecile paranoiac, PRENDERGAST, may be cited; but in his case, as in that of GUITEAU, the popular excitement and temper must be held largely responsible for the result, not the requirments of the law. In Canada, it would appear, three-quarters of the acknowledged lunatics are legally capable of suffering capital punishment and are liable to it, at least when not actually asylum inmates.

It is a curious fact, and one that shows the irrational nature of the distinctions made by the English judges that according to it the morally insane, the most dubious and dangerous of all lunatics, could legally escape the penalties of the law, in being incapable of appreciating moral distinctions and therefore unable to apply any moral judgments whatever as to the nature of their acts. The nearer the lunatic is assimilated to the criminal, by this rule, the less is his criminal responsibility, his pathologic normal obtuseness is his salvation from the law.

Dr. BUCKE has done a real service by his statistical contribution to the question of the moral capacity and responsibility of the insane. His facts, of course, are not novel to alienists, but, as stated they have the advantage of a direct object lesson that ought to have weight and influence with those to whom the only conception of a lunatic is that of a raving maniac or an absolute dement. Without any doubt similar findings could be obtained by a like inquiry by competent observers in any large asylum or hospital for the insane, and considering the need of enlightenment on the part of the public and the legal profession it might be well if such researches were multiplied and published. It would be a good thing also to do away with the legal fiction that there is any real difference between a lunatic in an asylum and one as yet uncommitted, as regards their real responsibilty for criminal acts, and might be a step toward the greatly needed recognition of the many dangerous lunatics at large.

THE CORPUS DELICTI IN MEDICAL JURISPRUDENCE.

The LUETGERT case recently under investigation in Chicago has once more raised the question of the absolute necessity of proof of commission of a homicide or of finding of a dead body ere conviction of murder should occur. Even two centuries ago so many judicial murders had been committed because of neglect of precautions on the part of the prosecution as to evidence of a homicide or as to the existence of a dead body obviously the victim of homicide, that Chief Justice HALE (2 Hale P. C. 290) remarked that he "would never convict any person of murder or manslaughter unless the fact were proved to be done or at least the body found dead." Two very striking cases of this kind have occurred in the United States, one in Vermont and the other in Illinois. In the last, ABRAHAM LINCOLN was the attorney for the defense. The Vermont case was as follows (WHARTON and STILLÉ, "Medical Jurisprudence" Vol. I., p. 79 a): Two brothers, named BOORN, had an altercation with a brother-in-law, named COLVIN, an errabund lunatic. He fled to New Jersey. Several years afterward suspicion was excited by a dream of an uncle of the supposed murderers. In this dream he was told that COLVIN had been murdered and that his remains would be found in a spot that was pointed out. The dream was repeated three times, until at last the place was searched and some articles of clothing were found which were identified as COLVIN'S. Then a spaniel, connected in some way with the COLVIN family, was seen snuffing uneasily about the spot close by, calling attention to it by his importunities. It, too, was examined, and a cluster of bones were drawn up by the dog's paw. That these were COLVIN'S and that these almost miraculous interpositions were designed to bring the murder out, there were none in the com-

munity who doubted. Other circumstances led to the arrest of the BOORNS. They were conscious of guilt, and it is no wonder that these prosecutors, who after so long an interval had united by means so extraordinary to ferret out their guilt should have impressed them with the belief that it was vain to fight against what seemed to be divine vengeance. So one of them confessed an assault, and went on further to state how in order to evade detection, the body had been partially burned and the clothes destroyed. The first part of the story was true; the last was a fabrication, the result either of delusion, or of desperation, or of that impulse to complete a story with which the imagination is sometimes seized. That the actual death was indeed false was shown by the subsequent appearance of COLVIN himself in time to intercept the execution of at least one of his supposed murderers. In this case prosecution and "expert" evidence played a part. The bones were examined by irregular "physicians" who declared them human. One physician, however, thought otherwise and was able to demonstrate his position. The bones were in a degree pulverized, but some pieces were in a tolerable state of preservation. Suspicions were excited that the body was burned and some parts not consumed cast into the stump, and other bones put among them for deception. Some time after the departure of COLVIN a barn belonging to Mr. BARNA BOORN was accidentally consumed by fire. It was conjectured that the body was taken up and concealed under the barn and mostly consumed. About that time a log-heap was burned by the BOORNS, near the place where the body was supposed to be deposited; it was thought by some that it was consumed there.

Of the Illinois case LINCOLN gives a decidedly humorous account in a letter to SPEED (LAMONT'S Life of ABRAHAM LINCOLN). The case occurred in 1841. Three brothers named TRAILOR were arrested on the charge of murdering a man named FISHER, who, when last seen, had been in their company. Strong circumstantial evidence was adduced, inclusive of the testimony of an "expert," as to human hair cut from whiskers in a struggle, at a spot where other evidences were found and where the crime was alleged to have been committed. The case was fortified (WHARTON and STILLÉ) by expressions alleged to have been subsequently used by one of the brothers as to his having become a legatee of the deceased. The examination had scarcely been finished before one of the defendants made a confession detailing circumstantially the whole transaction showing the previous combination and ending with a direct statement under oath of the homicide. The defense produced Dr. MERRYMAN, who swore that he had treated the victim of the homicide for insanity due to traumatism, that he was given to wandering tendencies consequent on this insanity and that he had been under observation two days subsequent to the date of the alleged homicide and that he would shortly be produced before the investigating justice. To the astonishment of the whole country, however, the "deceased" made his appearance in just time enough to intercept a conviction. The only way of accounting for the confession which had been produced was, that the party who made it, in the desperation of impending conviction, took this method of cutting short suspense. In view of the practically unanimous testimony of the medical experts for both prosecution and defense in the CRONIN case it seems a little absurd at this date to claim that from the casual observation of a few hairs and a few stains that human blood and human hair can be identified beyond a doubt. The elements of error in such investigations were so thoroughly outlined by the medical experts on both sides that it would only be a simple precaution for the prosecution to avoid them at the outset of a criminal case, lest criminals evade justice through the difficulty of proving unjustifiably strong counts in an indictment. Such counts endanger on the one hand the innocent, while in the resulting reaction they tend to protect the guilty. In view of the admittedly large number of judicial murders due to the absence of a dead body or corpus delicti the greatest possible use of the fundamental legal principle of the presumption of innocence (which requires that all circumstances which can be interpreted in accordance with innocence should be so interpreted) should be made. The function of the medical expert here is not to play the detective, but, as elsewhere, to determine scientific truth. This is his duty both as a physician and as a law-abiding citizen.

CORRESPONDENCE.

Foreign Patented Articles.

NEW YORK, May 25, 1897.

To the Editor:—Our attention was recently called to a letter, which appeared in the JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION of March 13, 1897, signed "An American Manufacturer." Since the writer of that letter relates to foreign products which are protected by United States patent, and of which we, ourselves, control a few, we would state that the notice is not only misleading but also an offence to respectable firms. We can not believe that any of the large chemical houses of Germany act in the manner stated in your journal, *i.e.*, "make their own statements and attribute them to some doctor with a foreign name." As far as patents are concerned, would say that comparatively very few chemical products are patentable, since a distinct new result must be shown, and this is not an easy matter. Of all the so-called patent medicines, very few are really patented, but they are supposed to be, and mostly are of unknown and secret composition. The manufacturer who wrote the article in question is evidently preparing mechanical mixtures and is unable to produce scientific chemical compounds. Protection by patenting involves disclosure of their composition and this is the last thing their proprietors would think of. It is such secrecy that is opposed to every fundamental principle of medical ethics. Every scientific chemical product that is patented is protected only for seventeen

years and after the elapse of that time any one can prepare it, since in the patent a plain and reliable method of making the products must be given, or else the patent is worthless. In this connection, we would state that we have introduced many years ago salicylic acid and chloral hydrate, the patents of which have expired, and now every one has the right to make the same, but these articles are at the present time so much reduced in price that it would not pay any one to start a new factory for the same.

You will see from the above that the term patent is grossly misapplied in the case of anything secret. A thing patented is a thing divulged.

Many of the American manufacturers of pharmaceuticals, etc., coin a new word for their preparation, and if they do not have it registered as a trade mark, they know that they are protected under the common law forever, hence a trade mark really affords much longer protection than a patent.

In a leading article entitled, "The Ethics and Economics of Proprietary Preparations," published in the *New York Medical Journal* of May 22, 1897, the views of Dr. Charles Rice, member of the committee of revision of the United States Pharmacopeia, are clearly defined, respecting patents for scientific chemical products and secret nostrums. Dr. Rice says:

"A patent not only does away with all secrecy, which is usually considered the objectionable feature of a proprietary article, but it commonly acts also as a sort of guarantee of the uniformity of the product in composition, strength and purity." All of our chemicals are of known composition and properties, hence there is no secret whatever about them.

We remain, yours truly, SCHERING & GLATZ.

Some Untoward Effects from Trional.

MEMPHIS, TENN., May 24, 1897.

To the Editor:—Some months ago a patient of mine took a dose of 20 grains of trional at 10 P.M., for insomnia with peculiar results cited below.

Shortly after having taking it he went to sleep and did not awaken until he was aroused the next morning for breakfast. Not feeling very well, he had a cup of coffee brought to his bed. After a short while he arose and went to his office, but feeling very bad he returned home about 10:30 A.M. and again lay down and went to sleep. On being aroused for dinner by the servant, his wife being away, he responded that he would be down in a few minutes, but instead he went to his club for dinner.

While at the club he must have felt ill as he went into the lounging room and slept until 7:30 P.M., when he was awakened by a porter.

He felt completely dazed and as if he had awakened from a horrible dream. It was some time before he could collect himself and realize that he was at the club. He was very much surprised to find himself there, as he had absolutely no recollection of having gone there, or eaten dinner or slept there. His mind was a blank from the time he returned from his office in the morning at 10:30 A.M. until 7:30 P.M., having remembered nothing he had done during that time and reporting this effect from hearsay. During this time he met several friends who say he talked and acted rationally, but complained of a severe headache.

I report this case, as it was of much interest to me, inasmuch as I have always held that many of these hypnotics are given too freely and that there is a certain amount of danger connected with all of them. K. B. HERMAN, M.D.

PUBLIC HEALTH.

Progress of the Bubonic Plague.—A report from Paris, May 10, is to the effect that the Tonkin officials on the Chinese frontier and just within the boundaries of the colony, have discovered several cases of the plague. Special precautions have been taken.

Rations for Shipwrecked Mariners, Etc.—Langlois, chief of the Phys. Lab. of the Paris Faculté de Méd., comments on the terrible sufferings and insanity of the shipwrecked crew of the *Saint Nazaire* (who had six hours for their preparations before abandoning the ship), by urging a reform in the boats carried on board ship. Something is radically wrong, he states, when these boats are swamped and destroyed the moment they touch the water, as so often happens. He suggests the following ration for such cases, combining the maximum of calories utilized with the minimum of bulk: Dutch cheese (100 grams = 350 calories utilized); sugar (60 grams = 200 c.u.); crackers (600 grams = 1000 c.u.); meat and fish pastes (300 grams = 600 c.u.) with sardines, etc., as convenient, and especially condensed milk (100 grams = 350 calories utilized), which makes a very nutritious and palatable drink diluted with sea water, as salt improves it for most persons. Two pounds apiece of this ration, or a total of half a ton for twenty-five men, would be ample to sustain life and enable the crew to resist cold and exposure for ten days, with a half ton of water. The boats should be built to carry this amount and protect it from the elements. He disapproves theoretically of alcohol, but adds that the moral effect of a little wine or diluted brandy should not be ignored.—*Presse Méd.*, April 17.

SOCIETY NEWS.

Twelfth International Medical Congress.—The following is the program of the proceedings of Section on Laryngeal and Nasal Diseases:

1. Suppurations of the Nasal Accessory Sinuses (except the maxillary), their diagnosis and treatment, Dr. E. Moure, Bordeaux; Dr. M. Hajek, Vienna.
2. Cancer of the Larynx, its diagnosis and treatment, Prof. O. Chiari, Vienna; Dr. G. Catti, Fiume.
3. The Causes and Treatment of Loss of Voice in Singers, Prof. H. Krause, Berlin; Dr. M. Lermoyez, Paris.
4. The Progress Made in the Treatment of Laryngeal Tuberculosis since the Last International Congress, Dr. Ruault, Paris; Dr. J. W. Gleitsmann, New York.
5. Laryngo-Stroboscopy, Prof. Simanowsky, St. Petersburg.
6. The Use of the X-rays in Laryngo-Rhinology, Dr. I. Macintyre, Glasgow; Dr. Mount-Bleyer, New York.
7. Œsophagoscopy, Prof. V. Hacker, Innsbruck.
8. The Adaptation of Photography to Laryngology, Dr. I. R. French, Brooklyn; Dr. Flatau, Berlin.

Besides the above it is proposed to arrange a joint meeting with the other Sections on the question of Serum Treatment of Diphtheria.

The committee ventures to hope that you will consent to communicate the results of your observations and investigations as regards the subjects mentioned above as well as any other subjects pertaining to our special branch.

We beg you to furnish us, not later than June 1 (No. 8) with the titles of your intended communications with a detailed résumé of their contents, in order that both may be got out of the printer's hands in good time.

We remain, sir, yours respectfully,

E. STEPANOFF. A. BELAYEFF.

Congress of the Surgeons of Germany.—The twenty-sixth annual congress was held at Berlin in April. The first address was from the standpoint of internal medicine—a delicate compliment from the surgeon to the physician—v. Leube spoke from an experience of over a thousand cases in the last ten years on the "Surgical Treatment of Ulcer of the Stomach." His treatment is absolute repose for ten days, with cataplasms on the epigastric region, as hot as possible, renewed every ten to fifteen minutes and replaced at night and after the first ten days with Priesnitz compresses. He first covers the skin with a compress of boricated vaselin to prevent blistering, over which the cataplasms are applied. They are continued until five days have passed without pain. A quarter of a

liter of tepid Carlsbad water is given at the same time, not hot, with some effervescent mineral water as a beverage. He rejects opium and prescribes nothing but small doses of sodium bicarbonate, especially at first. Milk, concentrated bouillon and a few crackers are all the food he allows during the first ten days. After this, relative repose, with eggs and a gradual return to the usual diet by the ninth week. He reports with this treatment of 556 cases, 75 per cent. completely cured, marked improvement in 21 per cent. and a mortality of 2.2 per cent., or 12 deaths in all, six of which were the result of perforation, and the others of hemorrhage. Surgical treatment is demanded when internal medication fails, and the patient's life is in danger, especially when there is constantly recurring slight hemorrhage, which leads almost certainly to anemia and death. Violent hemorrhage is a relative indication, as in some cases it seems to be the precursor of recovery, while in others death ensues before an operation is possible. In locating the ulcer for an operation the pain is very deceptive. Violent pains and persistent vomiting he ascribes to an imperfectly healed ulcer, and instead of an operation advises recommencing the course of medical treatment, with rectal alimentation if necessary. If this fails he recommends gastro-enterostomy. Perigastritis is the third indication for operating, but he ascribes these adherences and scattered abscesses to a still persisting ulcer, which should be cured if possible before resorting to an operation. Peforation, subdiaphragmatic abscess and the presence of a tumor formed by the thickened gastric wall and its adherences to the abdominal wall, are all indications for immediate operation, which statistics show is successful in 25 per cent. of the cases.

Mikulicz, the "corapporteur," mentioned that the average mortality from gastric ulcer is from 13 to 50 per cent., much higher than Leube's figures. He stated that the results obtained in Billroth's clinic, Czerny's and his own, with resection of the stomach, gastro-enterostomy and pyloroplasty were before 1891, a mortality of 39.3 per cent. with the first; 43.5 per cent with the second, and 23.8 per cent. with the third. Since 1891 the mortality with resection has been 27.8 per cent., with gastroenterostomy, 16 per cent.; and with pyloroplasty, 13.2 per cent. These figures should encourage surgeons to operate cases that resist medical treatment. His own observations have convinced him that gastric ulcers can be cured by restoring the permeability of the pylorus, whether the stenosis of the pyloric stenosis is of a cicatricial or spasmodic character. He is even tempted to accept the theory that the pathologic syndrome of simple ulcer of the stomach is due solely to the stricture of the pylorus. Circular resection should be reserved exclusively for cancer. He used to prefer gastro-enterostomy to pyloro-plasty, but now he prefers the latter, unless it is counter-indicated by adherences or much thickening of the gastric wall. If gastro-enterostomy is selected, it should be completed with an entero-anastomosis between the two ends of the intestinal loop, in contact with the gastric wall, in every case when there is reason to fear regurgitation of the contents of the intestines from atony of the walls of the stomach. In operating, the shock should be reduced as much as possible by using the Schleich method of anesthesia, instead of general. Perigastritis requires prompt intervention. He added that epigastric hernia simulates all the symptoms of gastric ulcer, and warned against the deceptive gastralgias of neurasthenic subjects.

Alsberg related a case of ulcer adherent also to the liver, impossible to extirpate, which he enclosed with deep sutures, and a sero-serosa suture with the complete recovery of the patient. Braun also described one case in which the stomach wall was so friable that he could not suture it, but completed the operation successfully by suturing a piece of the omentum over the stomach wall.

Israel, Sonnenburg and König proclaimed the advantages of large openings into the abdomen, and Lennander stated that if the operating table is warmed, with intravenous injections of salt solution, and ether alone used, there is no need to fear operative shock, while rapid elimination of the noxious matters after perforation is the best means of combatting it. Heidenhahn has abandoned the use of wet compresses around the intestines drawn out during the course of an operation, having found that they caused a decided loss of heat, and now uses dry sterilized compresses exclusively. He always evacuates the fecal matters in such a case through a small incision, and administers a dose of castor oil at once after the operation. He reports 14 recoveries in 30 cases of intestinal occlusion for various causes.

The statistics of anesthetics for the last seven years are 134 deaths in 327,599 narcoses, or 1 in 2,444. With chloroform, 1 death in 2,039; with Billroth's mixed anesthesia (morphin, chloroform and alcohol), 1 in 3,807; with ether, 1 in 5,090; with ethyl bromid, 1 in 5,228; with chloroform and ether combined, 1 in 7,594.

Helferich's address was on, "Surgical Treatment of Hypertrophied Prostate." He stated that in four-fifths of the cases treated with castration, the gland was diminished in size and the subjective symptoms usually disappeared. These results are about the same as the statistics in regard to section of the vas deferens collected by Köhler. He considers these operations indicated in serious cases when catheterism is insufficient, with preference for the latter as more simple and benign, while fully as efficacious. Both he and Socin, who followed his address, consider the hypertrophy of the prostate merely one symptom of a more general affection of the entire genito-urinary system, due possibly to arterio-sclerosis, which should be carefully studied and treated as indicated, before resorting to surgical intervention. Socin classifies these patients as: 1, those without cystitis, with good functions of the bladder. These should have the bladder systematically catheterized and the diet regulated, which frequently puts an end to all the urinary troubles for years; 2, those with a median lobe to the prostate, which requires extirpation by epicystotomy, and 3, those with serious lesions of the bladder. Regular catheterism should be tried first, and if this is not enough, perineal prostatomy. While he does not deny that castration or section of the vas deferens can be employed in these cases, he still thinks that the same results can be obtained without operating. Even after these interventions, the bladder is never completely emptied. The prostate grows smaller immediately after the operation, which proves that merely deturgescence of the organ and not atrophy has been attained, and this could have been secured just as well by mere massage of the prostate.

NECROLOGY.

LYMAN MOORE TUTTLE, M.D., Albany, N. Y., 1859, of Holyoke, Mass., died there April 26. He was an assistant surgeon of the 6th Vermont Infantry and served as such until Dec. 26, 1862. As one of the founders of the City Hospital he gave liberally of his time and means until his death. His age was 60 years.

WILLIAM CLINTON THOMPSON, M.D., Ohio Medical College, 1839, and one of the founders of the Indiana State Medical Society, died April 19 in Indianapolis, Iowa, where he had been in practice since 1847.

JOHN F. KIMBLY, M.D., Jefferson, 1849, died May 24, from apoplexy, at his home in Owensborough, Ky. During the war he served as surgeon of the 11th Kentucky Infantry, U. S. V., for the period of three years, and afterward became a surgeon-general of his residential State.

JOHN J. LOBAUGH, M.D., Farmington, Ill., May 18, aged 68 years.——J. C. Jordan, M.D., Richmond, Va., May 21, aged 61

years.——W. W. Virdin, M.D., Lapidum, Md., May 20, aged 68 years.——Walter A. Boor, M.D., New Castle, Ind., May 24, aged 48 years, at one time a member of the State Medical Society and the AMERICAN MEDICAL ASSOCIATION.——W. S. Schultze, M.D., Louisville, Ky., May 24, aged 35 years.——Anthony Eugene Stoker, M.D., May 23, Philadelphia, aged 76 years. During the civil war he was surgeon on General Meade's staff, and after the close of the war was, for many years, surgeon at the Pennsylvania Hospital, and the Blind Asylum.——L. M. Lochman, M.D., York, Pa., May 21, aged 68 years.——Patrick O'Riley, M.D., Greenville, Pa., May 21, aged 58 years.——F. G. Coffin, M.D., Brockwayville, Pa., May 23, aged 43 years.——George R. Taylor, M.D., Waupaca, Wis., May 26, aged 75 years.——W. T. Aikins, M.D. Toronto, Canada, May 26.

MISCELLANY.

President George M. Sternberg.—As we go to press we are advised of the election of Surgeon-General GEORGE M. STERNBERG, U. S. A., to the presidency of the AMERICAN MEDICAL ASSOCIATION. His record as a surgeon on the battlefield, his rank as a sanitarian and his eminence in bacteriologic investigation, make this selection an admirable one and adds crowning luster to the Golden Jubilee.

The Journal Special Train.—A large number of members of the ASSOCIATION availed themselves of the opportunity to go to the meeting on this train. The officials of the company surpassed all former efforts to provide for the comfort of the travelers, and as a result the equipment was the finest ever run under the auspices of the JOURNAL.

The number was augmented at various points along the line and the trip was made without a hitch. The party arrived in Philadelphia half an hour ahead of the schedule time.

Among those present from Chicago and the northwest were: Frederick Menge, Hugh T. Patrick, T. J. Murray, Christian Jonsson, J. P. Lord and wife, W. C. Wendell, F. C. Greene, J. V. R. Lyman, Wm. H. Mackey, J. W. Chamberlin, E. J. Radcliffe, R. W. Petty, J. F. Fulton, W. S. Cossar, *Chicago Times-Herald*, J. Takamine, J. W. Cokenhour, Wm. Eastman, E. J. Brown and wife, W. A. Jayne, E. S. Antisdale, Liston H. Montgomery and wife, J. W. Freeman, John B. Hamilton, E. J. Senn, C. C. Gratiot, G. E. J. Brown, J. H. Martindale, Wm. H. Harsha, C. S. Bacon, B. F. Whitmore, E. W. Lee, F. C. Hotz, Casey A. Wood, H. V. Würdemann, W. K. Jaques, W. A. Batchellor, G. W. Cox, Chas. Denison, W. VanWerden, William E. Quine, H. Ash, W. H. Palmer, C. H. Ludor and wife, J. T. Priestley, A. B. Spach, J. A. Gates, Frank Allport, A. R. Reynolds, H. Cradle, W. R. Fringer, C. M. Hobby, A. E. Prince, G. E. Crawford, H. S. Patrick, J. S. Love.

Diplomas Non-valid.—In a recent decision (May 27) Judge Neelan, Milwaukee, rules that physicians practicing medicine in that city, under diplomas granted by the Eclectic Medical College, are doing so without authority of law.

A New Publication.—The *X-Ray Journal*, Vol. I., No. 1, May 1897, has appeared. The purpose of this new monthly is "to give a faithful résumé of all X-ray work done in any portion of the globe." The subscription price is $1 per year; the editor, Dr. Heber Robarts, St. Louis, Mo.

Prevention of the Rusting of Instruments.—After an experimental investigation as to the rusting of instruments, it has been found that the process is due to carbonic acid contained in water, and that it is not absolutely prevented by the addition of carbonate of soda, as recommended by some. It was, however, found that rusting can be greatly lessened by first boiling the water before placing instruments in it, since thus the greater part of the carbonic acid is expelled. The most efficient means is to add to the boiled water 0.25 per cent. of sodium hydrate, pure, containing no sulphur. During an operation the instrument should lie in the solution thus prepared. Sharp knives placed in this preparation do not lose their edge in the faintest degree. —*American Practitioner and News.*

A Check Needed.—Governor Black of New York, who seems to be a man of mettle, has given out his decision that the expenditure of the State after the next legislative session will be still further reduced without the aid of a graduated inheritance tax. This measure failed to become a law. So far he has cut out $950,145.92 from the bills on which he has just acted, $789,195 from miscellaneous measures, $138,720.92 from the supply bill and $22,230 from the supplemental supply bill. "There ought to be," says the Governor, "some check applied, and applied at once, on the scale of expenditures for the State's charitable and penal institutions."

Chronic Cocainism from Catarrh Snuff.—A woman was received recently at a Montreal hospital with the trembling hands, staggering gait, insomnia, dyspepsia, loss of appetite, etc., of alcoholism, also visual hallucinations, dilatation of the pupils, mental dullness and pronounced moral depravity. She had always been a person of quiet, modest tastes, and her husband asserted that she never took liquor. Asked whether she took any drug, he went home to investigate and returned with a bottle of Agnew's catarrh powder, a patent remedy which she had been using as a snuff for four or five months, consuming three bottles a week. The bottle held 80 grains and contained 1.75 per cent. cocain. The therapeutic dose is ¼ to 1 grain.—*Un. Méd. du Canada*, April.

Constitutionality of Law Regulating Sale of Opium.—Section 3874 of the Revised Statutes of Missouri of 1889 provides that every person who shall set up, maintain, open, or keep any house, room or place to be used for the purpose of smoking opium, hasheesh or any other deadly drug, shall be deemed the keeper of an opium den, and, on conviction, be adjudged guilty of a misdemeanor and fined not less than $100 and not exceeding $1,000. This law, the supreme court of Missouri holds, in State v. Lee, Jan. 19, 1897, constitutional, and declares can not be considered class legislation, because prohibiting the keeping of an opium den comes within the police power of the State, under which the legislature has the power to regulate or prohibit such occupation in the advancement of public morals, health and the safety of its citizens. It is true, continues the court, that opium is often used as a medicine. So is whisky, but the right of the State, under its police powers, to prevent its sale altogether, except for medicinal purpose, is indisputable. Nor is the foregoing law in restraint of trade. It does not prohibit the disposition of opium as a commercial agent, but prohibits its use as a kind of intoxicant. And it does not deny to any person equal protection with other citizens, is not unreasonable or oppressive; nor does it, concludes the court, in any way infringe upon any rights guaranteed by the constitution.

The Starch Habit.—Dr. L. Kahn of Leadville, in the *American Therapist*, May, reports a case of so-called starch-eating habit. A female, aged 20, unmarried, had been in invalid condition for ten years subsequent to an attack by enteric fever, with slow convalescence. Suffered greatly with rheumatism, which probably caused a severe cystic inflammation which she had at the same time. Considerable heart trouble, which she could not fully describe but which caused her to faint on slightest excitement without any premonition. She stated she had fainted five or six times in twenty-four hours. The history for the past eighteen months was particularly interesting. She started her peculiar habit by taking lumps or pieces of starch from the box as she passed it three or four times daily; this gradually increased till she was using it regularly every few hours with a teaspoon. Her mother noticed the disappearance of the starch and watched for the cause; discovering her daughter's habit, she stopped the supply. The starch habit lasted about six months. Now that the starch was no longer obtainable, she started on flour, first using a teaspoonful twice

or thrice daily, gradually increasing till she used two teaspoonfuls every hour when awake. Condition: weight, 92 pounds; very anemic and pale; eyes dull, patient loth to move, heart sounds normal but beats intermittent, pulse about 120, respiration, 25; lungs normal; skin, very dry and harsh; urine, sp. gr. 1030; no albumin or sugar, but excess of phosphates; tongue coated whitish-yellow; bowels constipated; nights sleepless; absolutely no appetite. Treatment: Externally, liberal use of didactic English in reference to the habit. Internally, strychnia in doses of the one-sixtieth of a grain ferruginous tonic and laxative. The results were favorable and progressive; patient's weight is twenty pounds more than two years ago, and the functions are in normal operation.

Lime Water as a Disinfectant for Linen and Cotton Fabrics.—Beyer has tested different methods employed for the disinfection of bed linen and underclothing. The ordinary methods by boiling are not suited to these articles, as the presence of blood, pus and feces causes an ineradicable stain if a high temperature is used. Soaking the garments in solutions of various soaps for one or two days failed in every instance to kill cholera, typhoid and pyogenic organisms which were mixed with the feces with which the garments were smeared. In some cases the germs were killed when the solution containing the linen was kept at 50 degrees C. for a few hours. With lime water the results were much better. Sample garments which were soaked in this solution for twenty-four hours were found to be sterilized. An equally good result was obtained in a hospital where about one-half a cubic meter of soiled linen was soaked in lime water for forty-eight hours, or for twenty-four hours if the clothing was first rinsed with lime water and then placed in a fresh solution. The lime water does not injure linen or cotton goods, but shrinks woolen to such an extent as to prevent its use.—*Fortschritte der Medicin.*

Intermediary Types.—The European edition of the New York *Herald* of late date states that an experiment in catacombs near the Jardin des Plantes of Paris has been instituted for the purpose of reproducing the intermediary types of cave dwellers. The underground passages employed were discovered only last year and are of Roman build. A number of steps lead down to a curious round chamber overtopped by a roof supported in the center by an enormous column of stone. Here bats, pigs, and all kinds of fish are to be kept in darkness for the minute study of transformations—the atrophy of certain senses and the hypertrophy of others. It has long been claimed that the eye under such conditions has been replaced by antennæ or feelers. Already the subjects of the present experiments are frightened by the dim light of the candles and scurry into the obscure corners. Only very occasionally will an official descend into these underground passages with a red lamp to take food for the animals, and more rarely still will M. Armand Viré and his colleagues visit the laboratory.

Liability for Maliciously Filing Information Charging Insanity.—The supreme court of Iowa affirms, in the case of Comfort v. Young, Jan. 22, 1897, a judgment of $750 for the plaintiff, who sued to recover damages for an alleged libelous publication that consisted of an information, filed by the defendant with the board of insane commissioners, charging that the plaintiff was insane and a fit subject for custody and treatment in the insane hospital of the State. The defense was made that the information was a privileged communication. Persons have the undoubted right, says the supreme court, to file such informations as the one in question, when made in good faith and in the honest belief that the statements therein made are true. But one can not use such instrumentalities for the express purpose of gratifying his malice or indulging his passions without making himself answerable to the law. It is for the trial judge to determine whether the publication complained of was privileged or not, and, if privileged, whether absolute or conditional; but it is for the jury to find whether the proceeding was instituted through malice.

Undulation of the Nervous System.—Broco and Richet have demonstrated the existence of rhythmic undulations in the nervous system, obeying the general laws of synchronization of oscillating bodies, with a negative period and rhythmic responses to one in two, and one in four stimuli. They have experimented with electric excitation of the brain, and also, more recently, with the hyperexcitability to the reflexes produced by chloralose, and found the "refractory" or negative period the same in both forms of excitation, and also in normal and choreic dogs. They conclude that these facts signify that all these stimuli, electric, reflex or pathologic, can be substituted for each other, and that all have one property in common, viz., the undulation proper of the nervous system.—*Semaine Méd.*, March 31.

Aseptic Traumatic Fever.—Pillon ascribes this condition to the absorption of pyretogenic substances evolved: 1, in the traumatic effusion; 2, in the products of necrobiosis of the mechanically injured cells; 3, products evolved by the anatomic elements disturbed in their vitality; 4, products secreted by the migrating white corpuscles. He obtained a constant and progressive hyperthermia in guinea pigs by injections of salt solutions holding living white corpuscles in suspension. His experiments are described in the *Presse Méd.*, of March 27 and demonstrate that the secretions of living or necrobiotic migrating cells play an active part in the genesis of hyperthermia; but it is still unknown whether this is due to the fibrin ferment, uric acid or nuclein. (Ewald, Schnitzler.) He adds that a certain proportion of the elevation of the temperature is due to the sensitive nervous element.

Resection of the Liver to Remove a Multilocular Hydatic Cyst.—This is the first case of the kind on record in which the abdominal cavity was closed after the tumor was removed. The patient had complained of a dull pain in the hepatic region and a tumor was palpated, moving with the liver in respiration. Through an incision parallel with the right costal arch, P. Bruns resected the tumor, the size of a man's fist, after liberating the adherent gall bladder. The hemorrhage was slight, requiring only the ligature of two arteries. The lips of the wound in the hepatic tissue were united with a deep suture of strong catgut and a superficial suture with fine catgut. The abdominal wound was sutured by layers. The wound healed rapidly and the patient left the hospital in three weeks.—From *Beiträge z. Klin. Chir.*, xvii, 1, in the *Sem. Méd.*, January 27.

New Method of Making a Permanent Pancreatic Fistula.—The *Cbl. f. Phys.*, of February 20, refers to Fodera's new method as "deserving of the greatest attention." It accomplishes the purpose completely, while the pancreas remains macroscopically and microscopically sound, and its normal secretions can be thoroughly studied. The duodenum and the pancreas are left intact and the arrangement of the intestines undisturbed. The pancreatic duct is located through an incision in the line of the umbilicus, and a small opening made into it, 3 or 4 millimeters from the duodenum. An ingeniously contrived arrangement of small silver tubes connects with one that communicates with the outer world as it projects from the wound, or it can be tucked into the hypochondrium. The outer end is closed at first, but in 8 or 10 days the receptacle is attached. The tubes heal into the tissues rapidly and thoroughly. For complete details see *Moleschott's Untersuchungen zur Naturlehre*, xvi.

Glycogenesis in Neoplasms.—The histologic resemblance in certain respects, between the tissues of the embryo and tumors, and the known presence of glycogen in the former, suggested to Dr. A. Brault the query whether glycogen could not also be found in neoplasms. He now announces as the result of his investigations that glycogenesis is an important

factor in the evolution of neoplasms, intimately connected with their nutrition and growth. Glycogen is fixed and stored in the cells of an invading tumor, in direct proportion to its rate of development, and hence his discovery is of great importance in determining the prognosis of neoplasms, and confirming the diagnosis. The location of the tumor does not seem to affect the glycogenesis, which depends solely upon the energy of its growth. The older, indurated zones of the tumor contain little or no glycogen; it is accumulated in the cells of the new invading zones, which show a glycogenesis surpassing that of the liver itself. Tested with iodin, the glycogen shows as small irregular mahogany brown drops, always inside the cells, never between them. It is especially interesting to observe the glycogenesis in neoplasms of the liver, contrasted side by side with the glycogenesis of the normal hepatic tissue.—*Presse Méd.*, April 3 from *Arch. des Sc. Méd.*, pp. 232, 301 and 419, 1896.

Another Medical Poet.—The production of a volume of Dr. Frederick Petersen's verses in the court room where the author was giving expert testimony in a recent murder trial, was an interesting incident of a highly melodramatic case. Whenever a medical man writes poetry it is viewed with some suspicion; the example of Dr. Oliver Wendell Holmes to the contrary notwithstanding. But Dr. Petersen, like Dr. Weir Mitchell, has wooed the muse to seme purpose, and his verses are distinctly good. The volume in question was the second he had produced, each of them containing a number of charming lyrics and some clever translations from the Swedish. The author is about 36 years old, and already a distinguished alienist. His volume of verses, "In the Shade of Ygdrasil," was published by the Putnams.—*Leslie's Weekly.*

Dr. Rizal, the Revolutionist of the Philippines.—Jose Rizal Mercada y Alonzo is spoken of as a wealthy doctor of medicine and a man of remarkable ability. He is said to be a doctor of law, as well as of medicine, holding German degrees as well as Spanish, and he has also attended post-graduate instruction at the Paris University. He is an author of note in Spain, two of his books which treat of political and social subjects in a novel and uncompromising manner having long since procured him the attention of the Philippine government and his banishment and imprisonment in a distant island, where it was thought his seclusion would be perfect. Yet he managed to keep in constant touch, during his banishment, with the other leaders of the revolutionary party and directed the successive developments of their propaganda as well as if he were free. Rizal ordered the adoption of the *pacto sanguinis*, or bond of blood, by which the members of the *catapunin* were bound together, well knowing that the Malay race could only be successfully aroused to fanaticism by an appeal of this kind. The influence of nearly four centuries of Christianity has largely changed the outward seeming of the people, but at heart they are the same, as Rizal well knew; hence his suggestion of surviving the bloody compact among the brotherhood of the revolution, who have been largely held together by this bond, made with the most impressive rites. He is above the average height and has the characteristic snake-like expression of so many men of Philippine birth, but mixed Mongolian and Malay blood. It is a very repulsive face, immobile, yellow, passive, showing no change or sign of the thoughts passing through the brain, except for an occasional very unpleasant, half-closed, sidelong glance of the narrow eyes, when the owner steals a rapid and furtive glance at any object.

Longevity at a Higher Rate in Temperate Climates.—The official figures of a recent census report show that climate determines longevity; that is to say that within the temperate zone, the duration of life is higher than in warmer or semi-tropical countries. To quote conclusions: The average number of persons over 60 years old in 1,000 inhabitants in the United Kingdom is 77, and in the German empire, the climate of which is similar, it is the same. In Holland it is also 77; in Denmark 84; in Sweden 88, and in Norway 90. In Russia the longevity of the inhabitants is greatest in the northern provinces and lowest in the southern ones. The average of European countries in the north temperate zones, England, Germany and Holland—77 a thousand—falls to 71 in Austria and in Portugal. In Spain, where the climate is generally milder than in Portugal, the number of persons over 60 years of age in a thousand is 58 only, and in Greece it is 56. In the East Indies, as far as there are any authentic figures, the average is only 40 in a thousand inhabitants. In South America the average is about 50, though there are, of course, many exceptional cases. During 1896 the death of 188 persons over 90 years—14 of whom were actually over 100—was recorded in Great Britain—the average longevity rating in the following order, Ireland, Scotland, England. Of a thousand persons, men, women and children, resident in England, the average number over 60 years of age is 72, or somewhat more than 7 per cent. In Scotland the proportion over 60 years of age is 7.7 per cent. and in Ireland it is 10.5 per cent. Ireland follows after France as regards respective age, the proportion of adults over 60 years being 127 out of each 1,000 inhabitants. The United States do not stand very high in the scale of the elderly, the law seeming to be that life is longer in old than in new countries. Unexpectedly this census reveals the fact that the birth rate is the greatest in England and the least in Ireland.

Appendicitis; Hysteric, Lithiasic, Primary or Secondary.—The clinical picture of acute appendicitis has been observed in several cases of hysteria lately, and the special symptoms were relieved by ablation of the appendix, although it was found only slightly affected. It is evident that a comparatively insignificant appendicular congestion, in a hysteric subject, may simulate a severe appendicitis or peritonitis. Talamon, Hayem, Rendu and Brissaud relate deceptive cases of apparent acute appendicitis and peritonitis, the only means of differentiation the non-exact location of McBurney's point and the presence of hysteric stigmata. Debove has seen hysteric phantom tumors simulating an appendicular abscess disappear under the influence of chloroform. Much discussion has been elicited by the acceptation of "intestinal lithiasis" as a common occurrence and cause of appendicitis. Reclus and Lucas-Championnière consider appendicitis usually the consequence of muco-membranous entero-colitis, and seldom a primary affection. Dieulafoy disputes this, and has collected 800 observations of chronic muco-membranous or lithiasic entero colitis without one being accompanied by appendicitis. The former reply that most of the observations date from pre-appendicitis days, and are therefore unreliable. Dieulafoy advocates the term, entero-typhlo-colitis, as more exact, and others go still further and suggest entero-typhlo-appendico-colitis. Bacteriologic examination of the purulent exudation in 20 recent cases resulted in finding the coli bacillus alone in 7 cases; associated with the streptococcus in 5; with the pneumococcus in 5; with the staphyl. alb. in 1; with the strept. and staphyl. in 1; with various saprophytes in 2; streptococcus and aerogen. bac. in 1; staphyl. aur. in 1; undetermined bacillus in 1.—*Presse Méd.*, March 27.

The Bacillus of Syphilis.—Van Niessen replies at some length to the critics of his book on the syphilis bacillus, and adduces further evidence in support of his views. His later work has been carried on mainly in two directions: 1, the comparison of microörganisms stained in syphilitic tissues with those observed in pure cultures; and 2, the cultivation of the specific bacillus from the affected tissues. He has especially investigated syphilitic lesions of the brain and spinal cord. Sections of these were stained by Gram's method or cultivations made by imbedding little pieces in gelatin, so that one surface was left exposed to the light. On this numerous colonies soon devel-

oped, which were employed in further researches. The author claims to have infected eight rabbits in various ways, so as to produce secondary syphilitic lesions, but he has not yet succeeded in inducing the primary lesion upon the genitals. Owing to the great difficulty of excluding other causes, such as infection by tubercle and coccidia, his researches in these directions are not yet ripe for publication. He has, however, been able to demonstrate the "syphilococcus" in an excised primary sore of the prepuce, and also to cultivate it in gelatin mixed with the blood taken from the wound produced by the excision. The cocci were present throughout the tissues removed, but were particularly abundant, often forming emboli, in the deeper layers. Van Niessen is therefore convinced of the diagnostic value of the organism in primary affections, and although the result with later syphilitic lesions of the central nervous system are not as yet equally consistent, he is convinced that further improvements in investigation will render them equally available for diagnosis. His inoculation experiments are very striking. A pure culture of the organism, from the primary sore above mentioned, on veal broth was injected two months later into three rabbits, a goat, a guinea-pig and a pigeon. In several of the animals typical hard sores developed, which in the pigeon took on a phagedenic course, while in the goat and one of the rabbits gummata developed. The syphilis thus produced in animals was characterized by slow and protracted symptoms, by a marked tendency to cell proliferation in the form of a tumor with necrotic centers, and by involvement of the capillaries and lymphatics. The author claims to have proved that his syphilococcus when injected in pure culture into animals will produce both the typical primary affection and gummatous tumors.—*British Medical Journal.*

Insanity and Evidence.—Only a little more than a year ago, the JOURNAL called attention to a very important decision rendered by the supreme court of the United States in the case of Davis v. United States, on the "Burden of Proof as to Sanity." (Vol. xxvi, page 343.) After a second trial and sentence to hanging, appeal was again taken to the same court, which handed down its second decision, Feb. 15, 1897, affirming the judgment of the circuit court, and reiterating its opinion that, while it is true that every man is presumed to be sane, yet whenever, by the testimony, the question of insanity is raised, then the fact of sanity, as any other essential fact in the case, must be established to the satisfaction of the jury beyond a reasonable doubt. Here the supreme court also approves, as under the circumstances, in no degree prejudicial to the rights of the accused, the charge given the jury that "the term 'insanity,' as used in this defense, means such a perverted and deranged condition of the mental and moral faculties as to render a person incapable of distinguishing between right and wrong, or unconscious at the time of the nature of the act he is committing, or where, though unconscious of it, and able to distinguish between right and wrong, and know that the act is wrong, yet his will—by which I mean the governing power of his mind—has been otherwise than voluntarily so completely destroyed that his actions are not subject to it, but are beyond his control." After a witness has once qualified himself as an expert, and given his own professional opinion in reference to that which he has seen or heard, or upon hypothetical questions, the court further holds that then it is ordinarily opening the door to too wide an inquiry to interrogate him as to what other scientific men have said upon such matters, or in respect to the general teachings of science thereon, or to permit books of science to be offered in evidence. At any rate, it insists, the trial court must have some discretion as to the limit to be placed in any given case upon the extent to which the expert testimony may be carried; and when, upon direct examination, the opinion of the witness is fully disclosed, it can not be said that the court erred in declining to permit on the same direct examination an inquiry into what is in some aspects both collateral and hearsay. Again, the supreme court holds that it was clearly within the proper limits of cross-examination to ask a medical expert: "You think, from your conversation with him, that he killed the man because he threatened his life?" and to receive the answer: "Well, in part; and because he thought his own life was in danger, and because he thought he had the right to destroy this menace to his own life."

New York.

GOVERNOR BLACK'S VETOES.—Governor Black has refused to sanction an expenditure of $200,000 for the Eastern Reformatory. He states that this institution "was put in about the most inaccessible part of Ulster County, and then a plan for its construction was adopted which it will take $1,000,000 out of the State to execute. There are to be accommodations for 500 boys or young men, who are to be reformed, if possible. Think of it! One million dollars for the housing of 500 persons!" He further claims that it would be more economical to entirely abandon this building and erect another for about $300,000. "Convicts should not be housed in luxurious hotels, for the support of which farmers and working men are to pay taxes." Among the bills carrying appropriations which the Governor vetoed were the following: An act to provide for the construction of certain buildings on Swinburne Island for the use of the quarantine establishment, $75,000; appropriating money for the construction of additional buildings for the New York State Woman's Relief Corps Home, $30,000; and many others which he suspected of having a flavor of special legislation. It is evident that the bills which failed to receive executive approval would have entailed on the State an expenditure far in excess of $1,000,000. Thus the Governor's failure to sign instead of vetoing a bill to discipline the hospitals and dispensaries is hardly to be regarded as a snub of the profession.

Washington.

DR. FORD APPOINTED ASSISTANT.—The vacancy of assistant to the superintendent of Garfield Memorial Hospital, recently caused by Dr. Heller's resignation, has been filled by the appointment thereto of Dr. J. H. Ford. Dr. Ford graduated a few weeks ago from Columbian Medical School, taking the honors in the practice of medicine and surgery. He has been associated with the hospital for several months past, and his promotion is accepted as one of the evidences of appreciation of his work in the institution.

ENFORCING QUARANTINE REGULATIONS.—Passed Assistant Surgeon M. J. Roseman of the Marine Hospital Service has been assigned to duty as quarantine officer at the port of San Francisco to enforce the national regulations for preventing the introduction of infectious and contagious diseases.

NEW HEALTH REGULATION IN THE DISTRICT.—It will now cost $10 to spit in a street car or a public building under the control of the District Government.

CONGRESS PROPOUNDS QUESTIONS.—The congressional joint select committee to investigate charities and reformatory institutions in the District of Columbia has addressed a letter to the mayors of about seventy-five principal cities throughout the country requesting answers to the following series of questions: 1. Whether any charitable institution in the city of which you are mayor receives the whole or a part of its maintenance from municipal or State moneys? 2. Are any public moneys appropriated to aid charitable institutions under the care or control of any religious denomination? 3. Are any public moneys appropriated to aid charitable institutions controlled by private corporations, whether sectarian or unsectarian? 4. In case public moneys are appropriated, please give the names of the institutions and the amounts of the annual appropriations.

WASHINGTON OBSTETRICAL AND GYNECOLOGICAL SOCIETY.—At the 246th meeting of the Society, held on the 21st ult., Dr. G. Wythe read a very valuable paper on "Membranous Dysmenorrhea." A case was reported with several casts from the uterus and a full report on the same by Dr. Reed, U. S. A., and Dr. Gray. The paper brought out a very full and valuable discussion.

Colleges.

WOMAN'S MEDICAL COLLEGE.—The twenty-ninth commencement of the Woman's Medical College of the New York Infirmary for Women and Children, was held May 27. Sixteen

received their degrees, of whom eleven were from New York State. The college building, totally ruined by fire on April 22, is soon to be replaced by a structure better adapted for "the growing needs." This year the college registry shows 106 students.

THE FACULTY APPOINTMENTS OF THE CONSOLIDATED COLLEGES.—The New York University Council with eighteen members present held a special meeting May 25 and elected to full professorships in the University-Bellevue Hospital College Dr. E. G. Janeway and Dr. Frederick S. Dennis. Dr. Austin Flint, Jr., was made adjunct professor of obstetrics, and Dr. G. B. Stewart, adjunct professor of anatomy. The roll of the governing faculty now numbers twenty-one members, while the clinical, emeritus and assistant professors are twenty-five.

PARK RICHTER, M.D., has been appointed Dean of the Medical Department of the Minnesota State University. The library of the late Dean Millard is to become the property of the College of Medicine.

THE commencement of Rush Medical College, Chicago, was held May 26. The graduating class numbered about two hundred and sixty.

THE commencement at the Johns Hopkins Medical School, will be held June 15. The graduating class numbers seventeen and is the first class to graduate from the Medical School, which is now four years old. Among the graduates is one woman.

Hospitals.

OAKLAND, California, is to receive $600,000 for the establishment of a hospital. The bequest is one made by Mrs. Catherine Garcelon, who died December, 1891, litigation having prevented its utilization until a recent decision of the United States Supreme Court ruled in favor of Oakland.——A recent report from the Toledo (Ohio) State Hospital shows 1,266 patients, April 10, 1897, as compared with 1,223 April 10, 1896. ——The Hospital of the Insane, Middletown, Conn., is to have some new buildings this summer.

Societies.

THE PHYSICIANS of the counties of Knox, Davies, Pike and Gibson, Indiana, met at Vincennes, and organized a society to be known as the White River District Society. They will meet biennially. The following officers were elected: President, W. W. Blair, Princeton; vice-president, J. L. Moore, Washington; secretary, J. T. Smith, Petersburg; treasurer, L. M. Becker, Vincennes. It was in Vincennes, several years ago, that what is now known as the Mississippi Valley Medical Association was organized, and the future of this new society is equally as promising.——The forty-eighth annual meeting of the Indiana State Medical Society was held at Terre Haute, May 20.——William H. Humiston, M.D., Cleveland, has been chosen president of the Ohio State Medical Society, and J. Geiger, M.D., of St. Joseph, president of the Missouri State Medical Society.——The new president of the Pennsylvania State Medical Society is W. Murray Weidman, M.D., of Reading, Pa.——The State Medical Society of New Hampshire, met at Concord, May 24.——The New York State Medical Association meets at Norwich, June 8.——Other gatherings noted are: Windham County Medical Society, Hartford, Conn., May 26–27; Georges Creek Medical Association, Frostburg, Md., May 20; Baltimore County Medical Society, Towson, Md., May 20; White River Medical Society, White River Junction, Vt., May 18; West Virginia State Medical Society, Wheeling, May 20; Newport Medical Society, Newport, R. I., May 19; American Academy of Medicine, Philadelphia, May 29 and 31. ——The Queens County Medical Society held their ninety-first semi-annual meeting at Mineola, L. I., May 25.——The physicians of Temple, Texas, organized the Temple Medical Association, May 22.——The fourteenth semi annual session of the East Tennessee Medical Society, was held at Newport, Tenn., May 28–29.——The Lincoln (Neb.) Medical Society met May 25.—— The Scandinavian physicians of the Northwest, especially of the States of Minnesota, Iowa, Wisconsin, North and South Dakota, have formed an organization. The officers are: President, Dr. Chr. Hirsch of New Ulm, Minn.; secretary, Dr. J. E. Engstad, Grand Forks, N. D.; treasurer, Dr. Olaf Hegge, Austin, Minn.; vice-presidents Drs. Oscar A. Fliesburg, Minneapolis; F. Foss Mohn, Decorah, Iowa, and John J. Ecklund, Duluth. The next annual meeting will be held in May, 1898, in St. Paul.——The North Dakota Medical Association convened at Grand Ferks, May 26.

A Washington Physician has forwarded his dues in currency to the treasurer, Dr. H. P. Newman, Chicago, without a letter of transmittal, thus making it impossible to properly credit him on the books, or to send a receipt.

THE PUBLIC SERVICES.

Army Changes. Official List of changes in the stations and duties of officers serving in the Medical Department, U. S. Army, from May 22 to 28, 1897.

First Lieut. William F. Lewis, Asst. Surgeon (Ft. Apache, Ariz.), is granted leave of absence for one month.

Major Henry McElderry, Surgeon (Ft. Leavenworth, Kan.), is granted leave of absence for one month, to take effect on or about June 24, 1897.

Major Edwin F. Gardner, Surgeon (Ft. Grant, Ariz.), is granted leave of absence for three months, to take effect on or about June 15, 1897.

Capt. Isaac P. Ware, Asst. Surgeon, is relieved from duty at Madison Bks., N. Y., and ordered to Ft. Grant, Ariz., for duty.

Capt. Champe C. McCulloch, Jr., Asst. Surgeon (Army and Navy General Hospital, Hot Springs, Ark.), is granted leave of absence for three months, to take effect on or about June 1, 1897.

Navy Changes. Changes in the Medical Corps of the U. S. Navy for the week ending May 22, 1897.

Surgeon H. G. Beyer, ordered to the Naval Museum of Hygiene for temporary duty in connection with the preparation of new microscopic outfits for ships and hospitals.

CHANGE OF ADDRESS.

Barber, W. M., from West Sunbury, Pa., to Birmingham, Ohio.
Burtch, L. A. W., from Chicago to Morrison, Ill.
Beller, O. B., From Chicago to Vinton, Iowa.
Barrett, Fred, from Chicago to Tower, Minn.
Carroll, C. C., from New York city to Liberty, Sullivan Co., N. Y.
Chesire, M. N., from Chicago to Anamosa, Iowa.
Cox, F. P., from Chicago to Kenney, Ill.
Clark, J. F., from Chicago to Angola, Ind.
Demaree, T. E., from Chicago to Rossville, Ill.
Devine, G. C., from Chicago to Oregon, Wis.
Evans, W. A., from 4313 Calumet Av. to 116 43d St., Chicago.
Frick, Lewis, from Chicago to Hilbert Junction, Wis.
Grove, W. W., from Chicago to Ligonier, Pa.
Hoelcher, J. H., from 298 Webster Av. to 284 Belden Av., Chicago.
Johnson, J. E., from Chicago to Marion, Ind.
Klepinger J. C., from Cerro Gordo, Ill., to Union, Ohio.
Lilienerantz, A., from San Francisco to 359 Telegraph Av., Oakland Cal.
Lensan, C. T., from Chicago to Mt. Ayr, Iowa.
Lehan, J. W., from Chicago to Dunlap, Iowa.
Proctor, C. M., from Chicago to Harvard, Ill.
Roler, A. H., from 2330 to 2843 Indiana Av., Chicago.
Riley, E. A., from Chicago to Huron, Kan.
Smith, F. F., from St. Augustine, Fla., to Bar Harbor, Mich.
Shaw, Carl A., from Chicago to South McAlister, Ind. Ter.
Scott, M. G., from Chicago to Sandwich, Ill.
Sweet, H. L., from Chicago to Mt. Etna, Iowa.
Synon, G. C., from 12th St. and Sawyer Av. to 900 W. 12th St., Chicago.
Sebjelderup, N. H., from Chicago to Granite Falls, Minn.
Schulze, W. C., from Chicago to Louara, Wis.
Schulz, E. F., from Chicago to Reedsburg, Wis.
Van Nuys, J. C., from Chicago to Franklin, Texas.

LETTERS RECEIVED.

Atlanta Medical College, Atlanta, Ga.
Brown, F. F., Advertising Agency, New York; Beckes, L. M., Vincennes, Ind.; Baruch, Simon, New York; Bush, F. W., Hannibal, Mo.; Bates-Whitman Company, The, New York; Burford, G. H., New York.
Chicago College of Dental Surgery, Chicago; Consumers Company, The, Chicago; College of Physicians and Surgeons of Baltimore, Baltimore, Md.; College of Medicine Syracuse University, Syracuse, N. Y.; Crawford, A., Miles, Iowa; Colorado, The, Sanitarium, Boulder, Colo.
Edwards, John M., Chicago.
Forman, H. M., Bradford, Ohio; Fessenden Mfg. Co., The, Pittsburg, Pa.; Ferguson & Goodnow, Chicago.
Gessner, H. B., New Orleans, La.; Gotwald, D. K., Springfield, Ohio.
Hummel, A. L., Advertising Agency, New York; Houghton, E. M., Detroit, Mich.; Haldenstein, I., New York.
Jackson, James H., Dansville, N. Y.
Kress & Owen Company, New York; Koechl, Victor, & Co., New York.
Loeb, H. W., St. Louis, Mo.; Long Island Bottling Co., Brooklyn, N. Y.; Langdon, F. W., Cincinnati, Ohio.
Milliken, Jno. T. & Co., St. Louis, Mo.; Marchand, Chas., New York; McNicholl, T. A., Sea Cliff, L. I., N. Y.; Mather, E., Paterson, N. J.; Medical Dept. University of Nashville, Nashville, Tenn.; Medical College of Georgia, Augusta, Ga.; Morse, J. F., New York; McCreight, S. L., Chicago; Moore, N. W., Milford, Ky.; Marion-Sims College of Medicine, St. Louis, Mo.
Procter & Collier Co., Cincinnati, Ohio.
Rochester Radiator Co., The, Rochester, N. Y.; Raymond, J. H., Brooklyn, N. Y.
Sanitarium, The, Battle Creek, Mich.; Spencer, D. O., Fowlerville, Ind. Ter.
Tyres, J. S., Washington, D. C.; Taraena Food Co. (2), St. Joseph, Mich.
Williams, N. A., Dade City, Fla.; Woodbridge, J. E., Cleveland, Ohio; Wilson, M. C., Lafayette, Ind.; Wampole & Co. H. K., Philadelphia Pa.